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UNIVERSITY OF PRETORIA

FACULTY OF HUMANITIES: DEPARTMENT OF POLITICAL SCIENCES

Dissertation submitted in partial fulfilment of the requirements for the degree of Masters in Political Sciences in the Faculty of Humanities, University of Pretoria.

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Module : STL 890
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Submitted : 30 September 2021

Topic:

Mapping the main food safety governance actors involved in the 2017/18 listeria outbreak in South Africa to learn lessons for improved governance.

KEY WORDS

main food safety governance actors; mapping of actors; South Africa; food safety governance.

The financial assistance of the Department of Science and Innovation (DSI) National Research Fund (NRF) Centre of Excellence in Food Security (CoE) towards this research is hereby acknowledged. Opinions expressed and conclusions arrived at are those of the author and are not necessarily to be attributed to the DSI-NRF Centre of Excellence in Food Security.

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Dedication

In the Lord of the Rings (Tolkien), Frodo says to Gandalf 'I wish this had never come to me'. Gandalf responded, 'So do all who live to see such times but all we can do is decide what to do with the time given to us'. Whilst on not as noble a quest as Frodo, I have felt during 2020/21 that I was crawling up Mount Doom, knuckles bloody, just to hand in this dissertation and like Frodo say, 'It is done'.

I would like to thank my husband, Morne JF Beeslaar, for being my "Sam" and sharing the "burden of the ring"; without whom I could not have done this. I'm grateful for the support of my "Merry" and "Pippin": my mom, Sharon Ransom and grandma, Maureen Alexander. I unexpectedly found a "Gandalf" who are a collection of best of humanity who steered and supported me. They know who they are. I didn't know my heart or mind had more space but what providence to have crossed each other's "red" paths.

I appreciate the work of my supervisor, Dr Camilla Adelle, given that I was not the easiest of students. Though this dissertation focused on food safety governance, the journey has introduced me to another side of security - food security in terms of human security - that I'm now passionately interested in. Thank you Dr Adelle and Prof Lise Korsten at the DSI-NRF Centre of Excellence in Food Security for this research gift. My admiration for the length Prof Maxi Schoeman will go to for students knows no bounds. Prof Schoeman facilitated and navigated me to the point of submission which she did not need to do. She is a reflection of the kind of academic I would like to be some day. I appreciate the holistic resource access for my research by the DSI-NRF Centre of Excellence in Food Security as it unexpectedly towards the end of 2021 opened a plethora of excellent opportunities. I wish you all well as you do this critical work in the challenging circumstances of COVID-19.

Finally, on the days I did everything but my dissertation; I glanced at the faces of my four children – Isabella Hannah, Gabriella Joan, Adara-Logan and Levi-Henri Beeslaar and forged ahead to be an example to them that though you might struggle, though it might not meet your expectations, the journey is meant to be and there are always lessons to learn so try, try and try again.

Abstract

In 2017/18 South Africa experienced the world's largest ever outbreak of listeriosis, a foodborne disease. Listeriosis emanates when the bacterium *Listeria monocytogenes* which is common in soil, water and plants; converts itself to a disease that manifests in humans. 978 National Institute of Communicable Diseases (NICD) confirmed cases from all nine of the country's provinces resulted in the World Health Organisation (WHO) declaring it an epidemic outbreak in 2017. In the search for the source of and attempts to contain the outbreak; a rare opportunity presented itself to shine a spotlight on food safety governance in South Africa. This dissertation set itself against the 2017/18 listeriosis outbreak to develop a map of the main food safety governance actors in South Africa at the time. This was to fill a gap in the South African body of food safety and food safety governance knowledge. There was a research space in this foundational area of understanding who the main food safety governance actors were, their roles, responsibilities and linkages including leveraging of resources, with power relations considered. The study was undertaken using a transformative philosophical worldview, a network and power balance governance conceptual framework, scoping literature review methodology with methods of purposively selected documents for documentary analysis and thematic analysis complementing each other to maximise meeting the aim of mapping the main food safety governance actors in South Africa at the time of the 2017/18 outbreak. The mapping exercise provided not only a clear indication of who the actors were in legislation and practice but also pointed to locally contextualised solutions to address food safety governance challenges having learnt governance lessons that emerged from the outbreak within the South African socioeconomic and political landscape during this period and in the short-term aftermath.

List of Abbreviations

| | |
|-------------|--|
| ADSA | Association for Dietetics in South Africa |
| ANC | African National Congress |
| APAC | Agricultural Produce Agents Council |
| ARC | Agricultural Research Council |
| AU | African Union |
| AUC | African Union Commission |
| CDC | Centre for Disease Control and Prevention |
| CFS | Committee on World Food Safety |
| CGCSA | Consumer Goods Council of South Africa |
| COVID-19 | Novel coronavirus 2019 |
| DAFF | Department of Agriculture, Fisheries and Forestry |
| DALRRD | Department of Agriculture, Land Reform and Rural Development |
| DEA | Department of Environmental Affairs |
| DIRCO | Department of International Relations and Cooperation |
| DoH | Department of Health |
| DSI-NRF CoE | Department of Science and Innovation - National Research Fund Centre of Excellence in Food Security |
| DTI | Department of Trade and Industry |
| DWA | Department of Water Affairs |
| EHPs | Environmental Health Practitioners |
| EU | European Union |
| FACC | Food Advisory Consumer Council |
| FACS | Food Advisory Consumer Services |
| FAO | Food and Agricultural Organisation of the United Nations |
| FSA | Food Safety Agency |
| FSG | Food Safety Governance |
| FSI | Food Safety Initiative |
| FSN | Food Safety Network |
| GCIS | Government Communication and Information Services |
| GDP | Gross Domestic Product |
| ICESCR | International Covenant of Economic, Social and Cultural Rights |
| IFSQN | International Food Society and Quality Network |
| IMF | International Monetary Fund |
| IMT | Incident Management Team |

| | |
|----------|---|
| MDGs | Millennium Development Goals |
| NCC | National Consumer Commission |
| NICD | National Institute for Communicable Diseases |
| NRCS | National Regulator for Compulsory Specifications |
| NSSA | Nutrition Society of South Africa |
| OECD | Organisation for Economic Co-operation and Development |
| Outbreak | 2017/18 Listeriosis Outbreak in South Africa |
| RASA | Restaurant Association of South Africa |
| RSA | Republic of South Africa |
| SAAFoST | South African Association for Food Service and Technology |
| SABS | South African Bureau of Standards |
| SALGA | South African Local Government Association |
| SANCU | South African National Consumer Union |
| Stats SA | Statistics South Africa |
| SDGs | Sustainable Development Goals |
| TBF | Tiger Brands Food |
| UDHR | Universal Declaration of Human Rights |
| UN | United Nations |
| UNDP | United Nations Development Programme |
| UNGA | United Nations General Assembly |
| USA | United States of America |
| WB | World Bank |
| WGS | Whole Genome Sequencing |
| WHO | World Health Organization |

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Table 3.6 Comparison Between Scoping and Systematic Reviews

CHAPTER ONE (1): INTRODUCTION

1.1 Chapter Introduction

South Africa's constitution provides for all who reside in its borders universal basic human rights. Section (27) (1) (b) (Constitution of the Republic of South Africa, 1996) instructs the South African (RSA) government to within reason of available resources provide sufficient food and water to all. The Universal Declaration of Human Rights (UDHR), which RSA didn't sign in 1948 due to its increasing racialized politics, was acknowledged as a fundamental, universal, supranational document by the first democratic President, Nelson Mandela, who significantly signed our constitution, our apex law, on the same day as the UDHR – 10 December. The UDHR (1948) Article 25 (1) is very specific that we all have the right to a standard of living that includes food. Problematically for many, the focal points in these regards in our constitution as with the UDHR are that they don't specify the amount, that food must be safe and nutritious or who within the broad term of government and / or governance should meet the obligation (du Toit, 2011). Currently the measurement of food security remains a challenging task (Maluleke, 2019).

De Villiers (2019) argued differently. For him, a legal jurisprudence precedent had been set with another constitutional RSA right, namely housing (shelter). The judgement was clear. The ruling was that all tiers of government were responsible and needed to coordinate laterally with implementation at municipal level. Technically, it meant the same for other basic rights but these need to be contested on a case-by-case basis, in other words, the human rights legal victory applied only to the specific relief made to that court. Daly (2018) cautioned that this approach hindered enforcing human rights by the Constitutional Court reticent to create a body of its own jurisprudence and play a more meaningful instead of gatekeeper role with the African Human and Peoples' Rights Court. Furthermore, to support his multidimensional claims or what I referred to as multi-tiered, de Villiers (2019) reminded that municipalities were directly responsible for supplying usable, potable water and electricity infrastructure together with the state-owned-enterprise, Eskom, which is critical for food safety. He significantly informed that since the advent of the democratic

constitution in 1996, two decades later, none of the nine provincial governments had taken national government to court to set aside legislation, request that work mandated from national government be declared invalid or their provincial law in a specific area trumped the national legislation pointed to these constitutional rights, incorrectly being applied as the national government was always de facto the centrally steering, vertical actor in policymaking and law.

In linking the constitution to this study, importantly Crean and Ayalew (2016) supported that the link between food security and safety is still to be fully comprehended and yet they are inextricably linked, which is a part of the linkages this dissertation sets out to connect but with the focus on food safety governance's (FSG) main actors. Following on, this chapter sets forth the context of the study, its scope and purpose. The problem statement, question and aim are addressed through the dissertation in terms of the research design. It purposively opened with the constitution as it is short-sighted for social science research such as this to not have the political and socioeconomic realities of RSA in the back of one's mind. For me, it impacted on how I selected, read and analysed in addition to the mainstreaming of a transformative worldview and governance conceptual framework through which the lens of the study is researched as FSG like all health governance matters most to those who can least afford it (Cloete, 2020).

This, the most marginalized individuals, required the urgent address of one of several gaps of FSG. The missing comprehensive map of main FSG actors was selected to be studied to serve as a foundation for other postgraduate students, researchers, policymakers and decision-makers to expand on governance lessons learned through the 2017/18 listeriosis outbreak. Listeriosis is a foodborne disease. This was an unfortunate but opportune timing to research FSG against a food crisis: the 2017/18 listeriosis outbreak; the largest in the world to date and bring a timely spotlight on the status of FSG actors as a policy issue (Hunter-Adams et al., 2018). Planning and prevention equate to policy which is within the domain of governance. Madelin (2008) stated that not only is governance an integral part of public policy, but it allows for a more inclusive approach. This is applicable to all foodborne disease and related illnesses. The medical science connects to political science of government and thus governance. It links Anderson's (2011) work on public policy to that of political science

imperatives as did Dryzek (1990) two decades earlier, who saw new forms of policy practices as one of the key solutions to socioeconomic ills. Anderson (2011: 6) noted that generally policy referred to the behaviour of an actor or set of actors in a particular area of activity. He defined it specifically as ‘a relatively stable, purposive course of action or inaction followed by an actor or set of actors in dealing with a problem or matter of concern’. He distinguished public policy from other forms by connecting it with Jackson and Jackson (1997) to Easton’s (1953) definition of the authoritative allocation of values. Joining the above points, it is clear that whilst government is the authoritative actor, it needn’t be only one in terms of governance which in turn affects the outcomes such as policy success. The above clarifying the connection between listeriosis as the background and FSG as the medium to identify its main actors through mapping.

1.2 Dissertation Topic

Within my study and professional area of political sciences, I received a bursary from the Department of Science and Innovation – National Research Fund (DSI-NRF) Centre of Excellence in Food Security to research FSG actors against the background of the 2017/18 listeriosis outbreak in South Africa. I had to consider iteratively as Mills et al. (2010) suggested the topic could be refined as more research was engaged with. The topic itself was determined by the gap identified in the scoping literature review. The topic being “Mapping the main food safety governance actors involved in the 2017/18 listeria outbreak in South Africa to learn lessons for improved governance”. Given the outbreak was listed by the World Health Organisation (WHO, 2018) as the largest ever listeriosis outbreak in the world, the gap of a main actor map propelled this to the top of the research options as it was a necessary foundational research step.

1.3 Focus, Scope and Contribution of the Study

The focus of this dissertation was to attempt to fill a gap identified in the scoping literature review namely, to map the main food safety governance actors at the time of the 2017/18 listeriosis outbreak in RSA. In the context of the European Union (EU), Verbruggen and Havinga (2017) discussed the increasingly complex and hybrid sector

relationships between the different actors in food safety; proposing that mapping would assist in identifying and explaining the role of all the primary actors. Mapping, though in different contexts and methodology (Chiou, 2009 & Daley et al., 2010) is not a new concept and neither are literature reviews, which Hart (1998) described as critical for understanding the research subject and the foundations of work already in existence to serve as a platform for further investigation. In this case, drafting the map of main FSG actors through the selected research design. The scope was limited to identifying RSA FSG who were mandated legally, contractually or held contributing response functions at the time of the outbreak of 2017 to 2018. The timeframe precedes 2017 as the literature confirming the actors was also earlier communicated, both through primary and secondary sources. The dissertation did not assess their performance, only mapped the main actors, and discussed the results focused on the aim outcome of the producing a visual main FSG actor map for the base benefit of improved food safety governance. The location of the study was solely in RSA but relevant comparative information was included for understanding of what existed abroad in terms food safety governance especially actors, their linkages and networks.

1.4 The Purpose of the Study: Problem Statement, Question and Aim

The dissertation topic is “Mapping the main food safety governance actors involved in the 2017/18 listeria outbreak in South Africa to learn lessons for improved governance”. The background is the 2017/18 outbreak in RSA as a point of departure, however this study had expansive opportunity to include the impact of outbreaks other than listeriosis. At a later stage, there was almost no option but to include COVID-19 to explain the changes in research design and where relevant information that was pertinent to this study or necessary to mention to be built upon going forward with links to food safety governance. The study is much less about COVID-19 than listeriosis. The purpose is contributing to FSG in RSA in a very specific and primary area, the main actors. There is no consolidated map used across the FSG sector. A map will show where there are opportunities to expand on or weaknesses to overcome all in the overall improvement of FSG in RSA.

1.5 Dissertation Context

1.5.1 Key Concepts

For clarity I put my understanding and usage of key concepts and terminology throughout the dissertation upfront.

Governance

‘The concept of governance is not new. It is as old as civilization’ stated the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP, n.d.) who went on to define governance as a process of decision-making and then choosing to implement decisions taken or not, across sectors not only in government. In its most basic definition, “Governance” is defined as ‘the act or process of governing or overseeing the control and direction of something’ which could range from a country to a multinational corporate or even a community organization (Merriam-Webster, 2020a). Goldsmith (2012, in The United Nations Series on Development, 2012) narrowed the scope of governance to decision-making in public organisations.

Prinsloo (2013) included the concept that governance can be distinguished on a spectrum with an advocacy for good governance which he correlated with living standards of a population in a state. Critics of this spectrum of good versus bad governance such as Bettcher (2017) questioned whether such an idealistic understanding of governance is realistic in the context of domestication, reform, and development. Instead, he argued that governance must be addressed within a state’s political and socioeconomic realities given that inequality continues to exist largely in the developing world. He continued to advise universal governance benchmarks serve to hinder and not promote governance since it is an impossible task from-the-get-go with limited resources. Kauffman (2019) suggested that the World Bank (WB) reframe its indicators to be more inclusive of non-Western approaches. Sundaram and Chowdhury (2012) proposed that such reform should best emanate from civil society whose interests were to promote social equality and economic development benefiting more than those self-serving solely in the political, public, and private sectors.

Alimi et al. (2010) noted that criticisms of good governance were directed at unrealistic ideals unilaterally imposed by various donors. For him, the criticism did not negate the importance of certain components of good governance such as transparency, accountability, and the rule of law. Wachira (2020) added that governance in Africa also needs to respect African solution benchmarks that are aligned to regional and continental strategy for societal transformation, public administration reform, rapid economic growth through secondary and tertiary industries accompanied by infrastructure development as captured in the African Union (AU) Agenda 2063. For Bettcher (2017) improved governance in developing states such as South Africa can be obtainable if decision-making and prioritization of deliverables remain stable and consistent. As our former President Thabo Mbeki said, ‘throwing more money at African countries is not the answer’ (1999) in reference to donor governance, which Bongmba (2004) agreed with and supported Mbeki’s call for an African Renaissance that saw Africa govern and make decisions in its each local context; sustainably with basically African governance actors supporting each other first.

Government and Governance

As for governance, it is not the same as government even though the terms are often used incorrectly interchangeably (Joshua, 2011). He elaborated that governance is the practical expression of policy drafting, decision making and implementation with government as one of the actors in this process. One of the reasons for this confusion put forward by Dufour (2009) was that “government” is a historical term that has been replaced the post-modern term of “governance”. He continued that though the words were connected to one other and often used in the wrong way; they could still be applied independently in very different contexts for example there are multiple actors in governance of which the government is one. As an actor, Easton (1953), saw government having the legitimate authority to impose values over the state and within the broader political system as the highest policy decision-maker.

Governance Actors

The UNESCAP (n.d.) saw formal and informal actors as intrinsic to governance, with government being only one of the actors and nongovernmental actors often grouped

together as “civil society” dependant and varied according to the type and level of governance. In his abstract, Popoola (2016) spelled out that ‘beneficial public policies remain a sine-qua-non for good governance’, which in turn was based on government and its interaction with nongovernmental actors in the sub-processes that led up to and down from decision-making. For Wolfsfeld (2015) policy and governance actors started with the primary political actor – the government – who was the only actor in the process who had the legitimate authority to be the final arbiter of decisions and implementation.

In order to analyze the documents effectively and efficiently; it was critical to distinguish between the terms stakeholder and actor as not only are they used interchangeably throughout the literature, but notably in government documentation with Landau (2017) deeming a stakeholder can be an individual, group or organization that has an interest in an issue or spectrum thereof including the government. An actor is a participant whether an individual, group or organization belongs to, enacts, or participates in a structure, system, or process, as can be seen in practice through the health work of Flink et al. (2012). Both terms were used as a reflection of the literature.

Mapping

Au and Ferrare (2015) in the context of corporate education reform saw mapping as a tool to locate the power and dynamics of actors within policy networks. Klonowska and Bekkers (2021) were specific in interpreting mapping of actors as essential to understanding the general warfare environment, in the case of behavioural patterns to discern potential policy movement. In essence as reflected in this dissertation which mapped the main FSG actors, mapping of actors allows policy gaps of roles and responsibilities to be filled in order to view the landscape to include analysis of current power relations, vertical and horizontal governance as well as central and self-steering. Gopal and Clarke (2021) put it simply: actor mapping visually chartered the roles, responsibilities of the main organisations and individuals who leveraged the power, resources and influence on policy and decision making within a sphere or sector of governance.

Food Safety

The Food and Agricultural Organisation of the United Nations (FAO, 2001) explained that food safety incorporated aspects of handling, storage and preparing to thwart disease and ensure food retained its nutrients. The Australian Institute of Food Safety (2019) similarly saw food safety from the vantage of handling, storing and preparation to reduce the risk of foodborne diseases. For Schutte (1993) such narrow definitions of societal issues were how the Western worldview tended to be scientific to the exclusion of local human socioeconomics.

Food Security

Napoli (2011) states that food security was a governance issue as far back as 1943 with the FAO Hot Springs Conference adopting a definition that food should be 'secure, adequate and suitable supply of food for everyone'. Napoli continues that by 1974 due to increased food supply and demand, the definition was amended to 'availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices'. The WB (1986) report on "Poverty and Hunger" focused attention on the systemic challenges of sustained food insecurity linked to lives and livelihoods which saw the adopting the definition of food security to include 'access of all people at all times to enough food for an active, healthy life'.

The FAO (2006) originally adopted in 1996 a definition of food security to be used internationally, namely 'Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life'. The FAO (2006) redefined food security to include safety with the definition that it 'exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life. Household food security is the application of this concept to the family level, with individuals within households as the focus of concern'.

Food Safety Governance

The 1996 World Food Summit adopted a definition of food security that explicitly incorporated that food must be “safe”, with the definition still used throughout the United Nations and associated organizations till today (Committee on World Food Safety, CFS, 2013). Succinctly FSG is best summed by the International Risk Governance Council (2013) who stated that it was a combination of policymaking, decision making, implementation plans to measurably improve food safety, monitor, and evaluate the food system consistently and creating more favourable conditions for inclusive stakeholder management to occur. For Martinez (2007) government and its agencies in addition to other actors such as the private sector and so forth were responsible to implement this to deliver safer, more accessible, and affordable food to the public. Pereira (2013) expanded food governance as the governance of the entire food system, which is not simplistically food safety or food security but a governance that starts at food production and culminates with food being put on a plate for eating.

Food Systems

A food system is the route any food takes from ‘field to fork’ (Sentient Media, 2018) much akin to understanding a food system encompasses all activities relating to the food value-chain from produce to plate, including safety aspects, both at a formal and informal level (Ledger, 2016 and McMahon, 2013). Burger (2021) offered a simplified version of the food system to include production, processing, distribution and consumption. Arndt et al. (2021) offers a more detailed description of a food system as the ‘sum of actors and interactions along the food value chain’ which is inclusive of agriculture, production, logistics, transport, sales, food preparations, consumption, and disposal. Food systems and their governance include aspects of access, cost, culture, enabling policy space, environmental impact, inclusivity, nutrition, safety and sustainability. Food systems are a cycle whose efficacy and effectiveness in terms of the above is impacted upon by shifting internal and external factors such as climate change, economic domestication, globalization and socioeconomics (von Braun et al., 2020). Food systems are large, dynamic governance systems that integrate cross sector issues including health which encompasses food safety (LeBlanc, 2019).

Transformative Worldview

The Associated Press: New York Post (2019) after interviewing socioeconomic researchers and activists in RSA relayed the problem and danger of an already over-burdened state with unemployment at over 25% in a population of almost 56 million, with an average household monthly income of R 1,149 and still many unfulfilled basic constitutional rights. Acclaimed African author and academic, Achebe (1996), wrote 'Until the lions have their own historians, the history of the hunt will always glorify the hunter'. Barnes (2019) made such a case for transformational research that addressed the local socioeconomic justice challenges in RSA. For him, this entailed the ethical responsibility to include social justice in research given that over two decades had passed since the first democratic elections in RSA, yet inequality, poverty and unemployment had not shifted positively.

Network Governance Conceptual Framework

Gorg (2007) reminded that governance is intrinsic to politics. Patterson et al. (2017) went further and stated that governance within politics held the keys to sustainable transformative agendas, such as I posited here for FSG. Hassall (2009) promoted the view that governance was an art to resolving problems. There were a number of governance approaches to these problems including but not limited to traditional, multi-level, digital, accountability and network governance. Traditional governance methods became outpaced by an ever-increasing rate of improvement in technology including communication. This provided a platform for citizens to become more civically educated and subsequently demand more information from their respective governments and thus open the door to network governance which sought multi-actor collaboration beyond government in itself simply making all the decisions.

1.5.2 The Link between Human Security, Food Systems, Food Security, Food Safety and Food Safety Governance

Ulum (2017) recognised that the Welsh School of Security credited to Wyn Jones and Booth centred on food security as part of broader political human security beyond the state-to-state security. He discussed its strengths and weaknesses and concluded that

it was an appropriate change in perspective in this modern era where private individuals are increasingly more significant than simply a member of a particular state. Mirroring this securitisation theory, the United Nations General Assembly (UNGA, 2012) stipulated in its adoption of resolution 66/290 that from henceforth all member states security went beyond the state to the notion of human security. Human security that sought to address common human challenges by breaking silos and working across sectors in a state to resolve issues of socioeconomic justice, survival and dignity. Browning (2013) quoted from the 1994 United Nations Development Programme (UNDP) Human Development Report to expand the definition of security beyond war and to those aspects that concern everyday human survival. The Universal Declaration of Human Rights (UDHR, 1948) preamble specifically linked human rights to not only peace but freedom and justice, which here philosophically includes socioeconomic justice.

For Crean and Ayalew (2016) it was important to recognise that these international supra-national documents, all used the definition of food security that went beyond access to include concepts such as nutritional value and safety. Ledger (2016) advanced that as the food system becomes more complicated, so too does its governance mechanisms. The World Health Organisation (WHO, 2015) reinforced that all aspects of food had to be seen as parts within a food system to overcome all challenges within the food system as a whole. Within the context of COVID-19, the United Nations (UN, 2020) acknowledged that the approach to food systems globally will need to be adjusted in the wake of the coronavirus. The coronavirus or COVID-19 (NICD, 2020) as it is better known is a current global pandemic that spreads through minimal human contact and is airborne with increasingly multiple mutations. The WHO (2021) provided grim global statistics that as of 23 September 2021, there has been 229,858,719 confirmed COVID-19 cases with an emanating death toll of 4,713,543. despite 5,871,211,646 vaccination doses administered.

Moyo (2019) argued that the failure to ensure no one in RSA went hungry simply created and reinforced the cycle of poverty, which was why the International Monetary Fund (2020) named RSA as the most inequitable country in the world. The FAO (2017) and Wight et al. (2014) connected the dots between food security, inequality, poverty and unemployment, giving credence to this worst rating of the number one most

inequitable country in the world. Despite this, Koch (2011) wrote that in terms of food security indicators South Africa should not be food insecure and continued that food security was a political priority at the dawn of democracy, with the Cabinet (Executive) agreeing to the development of a multi-sectoral and multi-approach to food security. He continued that their early years of government rule included an ambition to achieve universal access to sufficient, safe and nutritious food. More recently, amid COVID-19 and several political developments in RSA, Sihlobo (2021) noted that at a national level the country was food secure even being a multi-US\$ net exporter of both agricultural and processed foods. He cautioned that food security was more than having sufficient food but rather a strategic network of supply, demand, access, affordability and nutritional value which considered the dangers that poverty and political instability posed to changing the country's position from food secure to insecure.

1.5.3 South Africa: Historical and Current Socioeconomic Perspective to Contextualise Food Safety Governance

RSA was under colonial rule from 1652 to 1910. Almost 300 years and remnants of British rule remained until 1948 when the National Party won the elections, becoming a Republic a few years later and soon after institutionalised Apartheid, which until then was a widespread action, the legislation was disparate and application differed (BBC, 2018). Apartheid was what many up until today argue was a crime against humanity that lasted almost five decades, with Jones (2019) having stated that it was a legal and economic system that brutalized non-whites. In 1989 FW De Klerk became the President, unbanned the African National Organization (ANC) who had been deemed as terrorists but for people of colour worldwide were seen as a liberation movement (Kotze, 2020). The first free and fair, democratic, multi-racial elections were held on 27 April 1994 (BBC, 2018), now known as Freedom Day, which the ANC won and has continued to do so five elections later. As Abegunrin (2009) conveyed; it was indeed an achievement to move peacefully from white minority subjugation to a constitutional democracy for all South Africans, the majority of who are in legislation are termed Black (African, Coloured, Indian and Asian). In all independence celebrations there should be a constant reminder of the challenges to be faced to overcome decades of exclusion and create inclusive institutions that deliver freedom, not only in name

(Maathai, 2009) who extensively cautioned post-colonial independence governments in Africa that moving from a liberation movement to a government didn't automatically give the skills built over centuries by the colonizers to successfully govern.

Reinforcing the RSA socioeconomics to manage medical outbreaks e.g. even listeriosis, the WB (2019) noted that whilst the government had made good progress given the legacy of Apartheid, the slow pace of poverty reduction and inequality remained a critical challenge. The WB (2019) continued that in 2015 the richest 10% held 71% of the net wealth, whilst the vast majority of the poorest 60% held a miniscule 7% between them. They added in the first quarter of 2019, RSA unemployment stood at 27.6% within which the unemployed group 55.2% were youth. In context, the Apartheid government catered for the full basket of government services until 1990, accommodating the "premier" services for roughly 10% of South Africa's population, whereas the ANC government on assuming elected office by 1996, now had to cater for an estimated 50,26 million South African population of all races based on the South African Statistics 2000 Report (Stats SA, 2000a). The coronavirus worldwide pandemic (caused the RSA into lockdown starting on 27 March 2020) highlighted the societal schisms that 27 years after democracy there were still unfulfilled basic constitutional commitments, some relating to food, including safety, placing outbreaks of any kind most heavily borne by the most marginalized in RSA society (Cloete, 2020).

2020 was the 25th commemoration of Human Rights Day in RSA (Parliament of RSA, 2020). It is a historical reminder of the inhumanities people of colour suffered both during the colonial and Apartheid periods. It specifically acknowledges the 69 killed and 180 people injured by the police in what is now known as the Sharpeville massacre, given it was a peaceful protest against racial discrimination. A quarter of a century after the start of democracy, we have established that food is a basic human right, a right not fully fulfilled in South Africa. Access to affordable, safe and nutritious food is still an unrealized right for too many living in South Africa, which needs repetition of it being recorded by the WB (2019) as the most inequitable country in the world with a Gini coefficient of 0.63% having risen from 0.61% in 1996. According to the Organisation for Economic Co-Operation and Development (OECD, 2021) income is calculated per annum on how much of it is disposable per household. The Gini

coefficient is a calculation that compares the disposable income scores from most equal to the least equal. Hindering South Africa's commitments in terms of food safety and nutrition already established as both core components of food security and politics; unemployment stood at a staggering rate of 39.5% amongst the youth in country like RSA with a significant youth bulge (Stats SA, 2019a).

1.6 The 2017/18 Listeriosis Outbreak in South Africa

Schlech (2000) set the scene of the history of listeriosis, noting that it had only become better known over the last two decades, yet was still not well diagnosed by medical practitioners, even though Tschoutang (2020) recorded it was first identified in 1924. Schlech (2000) stated the *Listeria monocytogenes* was indeed identified in South Africa in the 1920s however it wasn't until the 1950s to 1960s that it was finally officially recognized, resulting in the medical listing of a foodborne disease known as listeriosis. Given the confusion between the two terms in public discourse, Lorber (1997) distinguished *Listeria monocytogenes* which is the bacterium that could result in the illness listeriosis. Dramowski et al. (2018) clarified that *Listeria monocytogenes* is a foodborne pathogen. Farber and Peterkin (1991) noted that the pathogen was found widely in food with the highest number of cases of it becoming listeriosis resultant from meat products, which was the source of the 2017/18 listeriosis outbreak in South Africa herewith referred to as the outbreak. For most the symptoms of listeriosis were usually mild and for a limited period according to the Centre for Disease Control and Prevention (CDC, 2012) who further advised that where listeriosis manifested more mildly, it did so in a range of clinical ways such as gastroenteritis, fever, flu-like symptoms including muscle aches and headaches.

Thomas et al. (2020) confirmed that that National Institute for Communicable Diseases (NICD) had traced the source of the outbreak to the Polokwane manufacturing plant of Enterprise, which is a subsidiary of Tiger Brands Foods (TBF), where the contaminated process meat known as "polony" was produced. Polony is a popular processed meat in South and Southern Africa. The South African Minister of Health stated this in March 2018, 14 months after the initial case was confirmed in January 2017 (NICD, 2018a). The Minister detailed that Whole Genome Sequencing (WSG) was used with an outcome of 91% ST6 *Listeria monocytogenes* strain identified in the

samples. This identification led to a further phased investigation which included meat processing facilities throughout the country being examined and tested. The Minister accentuated the inspection teams comprised of local government Environmental Health Practitioners (EHPs), staff of the NICD which was under the auspices of the Department of Health (DoH) and officials from the Department of Agriculture, Forestry and Fisheries (DAFF) – subsequently named the Department of Agriculture, Land Reform and Rural Development (DALRRD) - with oversight technical advisors from the WHO.

The Minister's statement was unequivocal that the Enterprise facility in Polokwane was the source site for producing the polony that resulted in the countrywide listeriosis outbreak. As a matter of procedure, he informed that the National Consumer Commission (NCC) had been told and issued the product recall notices, whilst the DoH issued compliance notices to all relevant facilities, DAFF suspended export of all such products until the matter was formally resolved and local government EHPs were empowered to undertake significantly more inspections and strictly charge for any transgressions.

Later in March 2018, after the Minister had officially declared the source of the outbreak and informed all necessary steps had been taken to officially declare the outbreak over (NICD, 2018a), the NICD (2018b) released an emphatic statement whose particular contents were that they had conducted a full epidemiological and scientific investigation, of which evidence-based results were provided for; confirmed by the WHO (2018) and other leading subject experts i.e., Thomas et al. (2020). In general, amongst the scientific community there was support for the process followed and outcome of the source but some such as Crouth (2018, as cited in Boatemaa et al., 2019) highlighted the NICD resource limitations and questionable 14-month timeline from the announcement of the listeriosis outbreak to confirmation of the source product instituted recall. Korsten (2018) insisted the scale of the outbreak could have completely been avoided if the long-known flaws had been addressed. The Minister of Health at the time, Dr Aaron Motsoaledi, confirmed that certain FSG flaws existed such as lack of full capacity but adamantly denied that the DoH could have been quicker to determine, source, trace and publicly announce on the listeriosis

outbreak. For DoH, the timeline, infection and mortality rate were in line with international data (DoH, 2018a).

Also using a system-wide approach and though focused on water safety Vilakazi et al. (2019) study had good parallels with food safety governance. Preventable deaths resulted where water was unsafe. Quality of water impacted on human health, nutrition and livelihoods. The authors correlated water with food safety by stating that food safety cannot be achieved without quality water and together they are important to achieving sustainable development. Much as the arguments of Korsten (2018) and Boatemaa et al. (2019) highlighted the unnecessary delay and extent of the outbreak due to preventable causes; Vilakazi et al. (2019) suggested that foodborne diseases mattered not only in terms of health impact, but economic loss, unnecessary food wastage and diminished public trust in food safety governance. In a developmental country like South Africa, as COVID-19 showed (WHO, 2021), transmittable diseases can be least afforded given the basket of as yet unmet basic constitutional rights. Grace (2015) wrote the impact of foodborne diseases included individual cases of stunted growth, greater exposure to comorbidities; negative resource impact on public health and economic curbing which made overcoming FSG challenges more difficult for the actors. FSG importance, challenges and government priority status is not isolated to RSA but given the country's Gross Domestic Product (GDP) placed it as number 32 in the world with only 1.32% growth since the last UN and WB study survey (WorldOMeter, 2017), FSG actors were likely to be under resourced hence the dominance of big corporates and government's willingness to have allowed them to self-steer based on other political and societal issues that were prioritized.

In the case of the 2017/18 outbreak, Thomas et al. (2020) recorded 937 NICD confirmed cases between 11 June 2017 and 8 April 2018 of which 738 outcomes were known with 193 deaths, an equivalent of 27%, roughly aligned to the government figures but going beyond the date the Health Minister stated the outbreak was over. Hunter-Adams et al. (2018) stated there were 1049 cases as the end of the outbreak went beyond the announcement of the source hence, they captured figures still in June 2018. Of the cases, there were 209 deaths or just under 20%. As per Ramaswamy et al. (2007) study showed that as rare as it might be for the pathogen *Listeria monocytogenes* to translate into a human foodborne disease, it required attention and

proactive management as outbreaks tended to lead to a 20 to 30% mortality rate. For example, Faber and Perkin's (1991) study found a global average of 24% mortality rate.

The problem statement is that South Africa experienced the world's largest ever listeriosis outbreak in 2017/18 raising questions about the state of FSG in RSA. This dissertation approached the problem statement from the vantage of the gaps in the knowledge of the actors. The problem statement seen from this way leads to the question of who the main FSG actors were at the time of the 2017/18 listeriosis outbreak; what were their roles, responsibilities and linkages. This led to the aim of using the research design methods to develop a visual map of these actors within a network governance framework.

1.7 Chapter Conclusion

This first chapter introduced the background, rationale and question to be answered by this dissertation. The study was qualitative with a desktop scoping literature review methodology. The study had a governance conceptual framework with emphasis on governance networks with power relations balance as the path to sustainable transformative agendas, such as I posited here for FSG. FSG was linked to socioeconomic equality for the majority of South Africans (Tapscott, 2017). Transformation of government systems including governance of all kinds is imperative when you interpret the Stats SA Quarter One Population Report (2019a) which puts the population at 58.8 million of which 39.5% are unemployed youth and when using a money-metric approach, a fifth of RSA had fallen below the poverty line set at R664.00 per month. A money-metric approach as explained by Hammond (1994), though not with full consensus agreed upon, referred to indicators such as pay, tax and welfare payments which are aggregated to reach a baseline figure. The governance of food safety as a component of food security is therefore no small matter when demographics of the country are over 90% black – African, Asian, Coloured and Indian (World Population Review, 2020) - yet they remain the most marginalised. FSG not only can set the standard for transformational governance, which is intrinsic to politics, but it can contribute positively to socioeconomic change.

In line with Alvesson and Sandberg (2013) the problem statement of the lack of an official FSG actor map had multiple repercussions which informed the question and aim. The next chapter focused on reviewing existing literature which Hart (1998) described as critical for understanding the research subject and the foundation of work already in existence. It was used to give impetus and direction to the identification of the main FSG actors through the brief spotlight the 2017/18 listeriosis outbreak in RSA flickered on FSG. The third chapter concentrated on the research design and how the worldview, framework, approach, methodology and methods were applied in the fourth chapter to ascertain results that met the research purpose criteria. The final chapter concluded by bringing together the initial research question and aims and tying them to the results and hence the conclusion of the study undertaken. Ultimately the dissertation was undertaken as best said by Golden-Biddle and Locke (1997:20), '...the major task also of writing involves working out how to make contextually grounded theory theoretical points that are viewed as a contribution by the relevant professional community of readers'.

CHAPTER TWO (2): LITERATURE REVIEW

2.1 Chapter Introduction

Using the interpretation of Pham et al. (2014), the dissertation used the methodology of a scoping literature review to extract and synthesise targeted information from the natural and social sciences body of FSG knowledge already in the public domain; both primary and secondary data. Wagman et al. (2014) used this method to successfully identify the research gaps in their field of study, which this study attempted to replicate within the broader body of knowledge inclusive of FSG, FSG actors and issues linked such as policymaking and decision-making based on socioeconomic realities especially in the wake of the planet earth's largest and deadliest ever occurring listeriosis outbreak in 2017/18 in South Africa (WHO, 2018).

I selected a scoping review as opposed to a systematic review as anecdotally and at first surface engagement it was apparent that the literature and associated work was ad hoc, not formally structured or well themed, detailed and coordinated. The scoping was influenced from the initial work of Korsten (2018) who stated that the South African scientific community were aware that such an outbreak was imminent, though not at the scale it occurred, as the gaps in food safety governance were evident prior to the outbreak; evidenced through outdated legislation and the absence of an effective regulatory system. These food system gaps allowed the corporate private sector actors to become complacent in effecting self-regulation to proper standards, thereby creating an enabling environment for foodborne illness to flourish. Ledger (2016) too in sum, argued that the lack of broad, coordinated food safety governance led to increased non-compliance with food safety standards. With this overview I homed in on literature to address a foundational gap of a map of the main FSG actors in RSA.

2.2 South African Food Safety Governance Commitments and the International Context

Informing the rationale for South Africa's increased commitments to aspects of governance that included FSG were international developments such as Han and Yan

(2019) reinforcing that the public needed to trust that the food they were purchasing was safe. This was important for social stability particularly in developing countries and emerging economies as it was part of a broader trust barometer for the public attitude towards government i.e., as in a social compact. Likewise, Bavorova et al. (2013) wrote, within the context of Europe, on the increasing awareness that the public had of issues relating to food security including food safety to mitigate risks and this placed pressure for authorities to ensure the development and implementation of effective government measures. Earlier Martinez et al. (2007) stated that the ever-increasing public awareness of food safety in North America and the United Kingdom was compelling governments to proactively advance FSG and be accountable for it. FSG gained more traction globally from the 1990s onwards due to advanced access to technological communication, scientific investment in FSG and it being key in the globalisation of commercial food (Mayett-Moreno and Lopez Oglesby, 2018). Relating this explicitly to FSG actors, Tantivess and Walt (2008) assessed the role of actors in the policy process notably in terms of the contribution of policy networks. They acknowledged, as above, the shift in governance from the 1990s onwards to increased attention on policy networks, especially as technology including communications innovated.

Against this international background in an increased focus on FSG, McMahon (2013) reiterated that successful food safety governance needed more focus on the politics than the technology, much as Schutte (1993) warned the shortfalls of Westernised politics was that it didn't well balance the technical with the humanitarian. For McMahon, governance was the answer to improve the technicalities of food safety by transforming and implementing FSG that equalled appropriately applicable actors jointly developing quality public policy. Once agreed, it was to be implemented and adhered by all actors fairly, not based on their access to resource leveraging power. The South African Human Rights Commission (SAHRC, 2018) observed that South Africa did not sign the Universal Declaration of Human Rights (UDHR) in 1948; however, the date that former President Nelson Mandela signed the post-Apartheid constitution into law was symbolically and specifically done on 10 December 1996 to acknowledge the spirit of embodiment of UDHR that all humans were equal and entitled to have their most basic human rights met. From this premise the domestic commitments starting with the Constitution and international with the UDHR were

negotiated, developed and adopted at different levels of legal formality and thus requirements to fulfil.

Eide (1996) reminded that 48 years later after the UDHR was adopted, the FAO in 1996 assembled Heads of State to discuss and agree on a way forward to tackle the worldwide crisis of 800 million plus people going hungry, and not accessing safe and nutritious food. This crisis perpetuates the poverty cycle, together with the millions infected each year by foodborne diseases as part of both domestic and international commitments in developmental countries such as South Africa. The Department of International Relations and Cooperation (2012) further confirmed that the South African government would ratify the United Nations International Covenant of Economic, Social and Cultural Rights (ICESCR), which it did, maintaining the commitment link of food with socioeconomic politics. Moreover, in recognition of its cog in the African continent, the South African government recognized the definition of food security to include safety as is in the African Union (AU) Agenda 2063 (African Union Commission, 2015), which states as its first aspiration to have a prosperous continent that inclusively and sustainably grows thereby transforming the current socioeconomic climate to one that includes but is not limited to food security, nutrition and good health. The Presidential commitment was for RSA to achieve targets domestically to meet the continental targets and where feasible assist fellow AU member states.

In terms of its UN commitments, the RSA government further adopted the UNs Millennium Development Goals (MDGs) in 2000 (Stats SA, 2015) and the Sustainable Development Goals (SDGs) in 2015 (Stats SA, 2019b), which had core focuses on hunger and health. Underscoring the importance of food security, safety and nutrition, the FAO (2018) recorded that in 2015 the United Nations General Assembly (UNGA) having realized that urgent attention was required to actualize the economic security articles of the UDHR, adopted resolution 70/1, which established 17 SDGs; this after the MGs were not met by the deadline of 2015. The FAO issued a warning that an estimated 821 million people worldwide remained under-nourished and food insecure. As such the United Nations Office of the Special Advisor on Africa (2015) confirmed that including South Africa, 189 member states adopted the MDGs of which Goal One of the eight goals was ending extreme poverty and hunger. Acknowledging the MDGs

were not achieved by their target date of 2015 the UNGA adopted resolution 70/1, which exchanged the MDGs for 17 SDGs. The outbreak and government in RSA together with ambitious commitments to food safety governance domestically and internationally saw Kesselman (2019) link human rights to food justice within the political and socioeconomic context of RSA. Her study noted that RSA still has a long road to travel to meet this constitutional and universal right imperative. To this end, the Legal Resource Centre (2020) highlighted that ‘the greatest threat to justice is inequality’. From another side, the most recent Stats SA (2019c) subject report: “Towards measuring the extent of food security: An examination of hunger and food inadequacy” confirmed that holistically RSA had sufficient food from both domestic production and imports where we did not produce the product or in sufficient quantity. The report supported the anecdotal and empirical evidence that the RSA government had made progress in eradicating hunger since the first non-racial and democratic elections in 1994 to date. The government had established an Inter-Ministerial National Food Security and Nutrition Plan in 2013, in addition to the National Development Plan of 2012 recognizing the importance of investment in the rural economy including infrastructure and agricultural primary and secondary industry, which from a governmental perspective included food safety governance implicitly within these broader official documents.

2.3 Food Safety Governance Challenges

2.3.1 Policy Issue Implications

The WHO (2020) guidance on food safety was that we must not forget it is a cycle. If not addressed it can be ferocious in outcome, thus best seen as a governance network that links and overlaps to achieve food safety within a much bigger food system governance conceptualization. Oni et al. (2016) agreed with the circular approach and emphasized the link between health and societal policy environments in a wide-ranging number of areas including physical, mental and sociological with impact from poverty, crime to educational development. Grace (2015) agreed but drew attention to limitations throughout developing countries and emerging economies in closing the gap in policymaking actors and their governance coordination due to the high costs proper FSG required. She added that in reality in many countries FSG was not

prioritised amongst even the food system industry as despite the several major negative impacts, foodborne diseases were accepted as an unavoidable health occurrence irrespective of its source.

Grace (2015) elaborated that FSG was often outpaced by new challenges in the food system as related to economic development, urbanization and changing diets. Linked to this, Wilson and Worosz (2014) argued that the cycle continued as in the absence and neglect of food safety governance, it ultimately encouraged a further public and private non-adherence to food safety standards. Struweg (2018) demonstrated how even a company listed on the Johannesburg Stock Exchange such as TBF who owns the manufacturing plant where the tainted processed meat was produced could deflect governance coordination and not be compelled to work with government; hence their response was a tardy, negative turn on stakeholder management and reputationally appearing to lack compassion. Olanya et al. (2019) made the pertinent point in their study on the costs of the outbreak; that it cost far more to the public purse to attempt to contain and eradicate these large and unplanned outbreaks than an upfront well researched, localised, multistakeholder proactive FSG policy. Boatemaa et al. (2019) argued that the outbreak formed part of a broader FSG policy challenge, as it pointed to the existence of other illness risks caused by bacterial infection, pesticide and antimicrobial residues. This they said needed to be addressed as part of improved FSG policy and decision making, which Cohen and Horev (2017) in their own medical research underscored that network governance was the best option however it would fail if not properly developed except as just a tick box exercise.

2.3.2 Public Health System Implications

Grace (2015) recorded that almost 98% of foodborne illnesses occurred in developing countries, of which South Africa is one albeit established as an emerging economy, with at least 40% of the cases affecting children under the age of five years old. Havelaar et al. (2015) emphasised the importance of FSG and a collaborative approach given the severity of the estimated results of health impact. They calculated that it roughly meant 120,000 deaths in Sub-Saharan Africa caused by foodborne diseases. Averett (2020) cited an updated WHO 2015 report to accentuate the devastation that foodborne diseases caused which he declared was equal to that of

the damages resultant from HIV/Aids, malaria and tuberculosis in Africa. Rossi et al. (2008) wrote that in immunocompromised individuals markedly those with comorbidities such as uncontrolled diabetes and high blood pressure etc. foodborne diseases such as listeriosis manifested itself both severely and invasively with a higher risk of fatality. This was and continues to be a real danger in South Africa, where public clinics are overwhelmed and don't have funds for extensive testing, hence misdiagnosis (Benatar, 2013) who continued that this is one of the persuasive advocacy reasons for the establishment of a National Health Insurance in South Africa. He noted even though RSA had improved significantly, the gap between the rich and poor in terms of health services were astoundingly huge, particularly with a population of 17% diagnosed with HIV/ Aids, not counting the other immunocompromising comorbidities.

2.3.3 Physiological and Educational Implications

Nagyova et al. (2019) made a fundamental point in any discussion on FSG, namely that every human requires food for their basic survival and as such, that food needs to be safe. Maslow (1943) developed a hierarchy of human needs of which the base, depicted below in Figure 2.3.3, is physiological. Noting the domino effects that Walthouse (2014) identified from hunger; food safety especially to avoid foodborne illness is a vital component to socioeconomic development in South Africa, yet Stats SA (2019c) cautioned that with increasing climate change and negative economic outlooks worldwide, intensifying pressure was being placed on food systems, with a cyclical impact on other areas in South Africa.

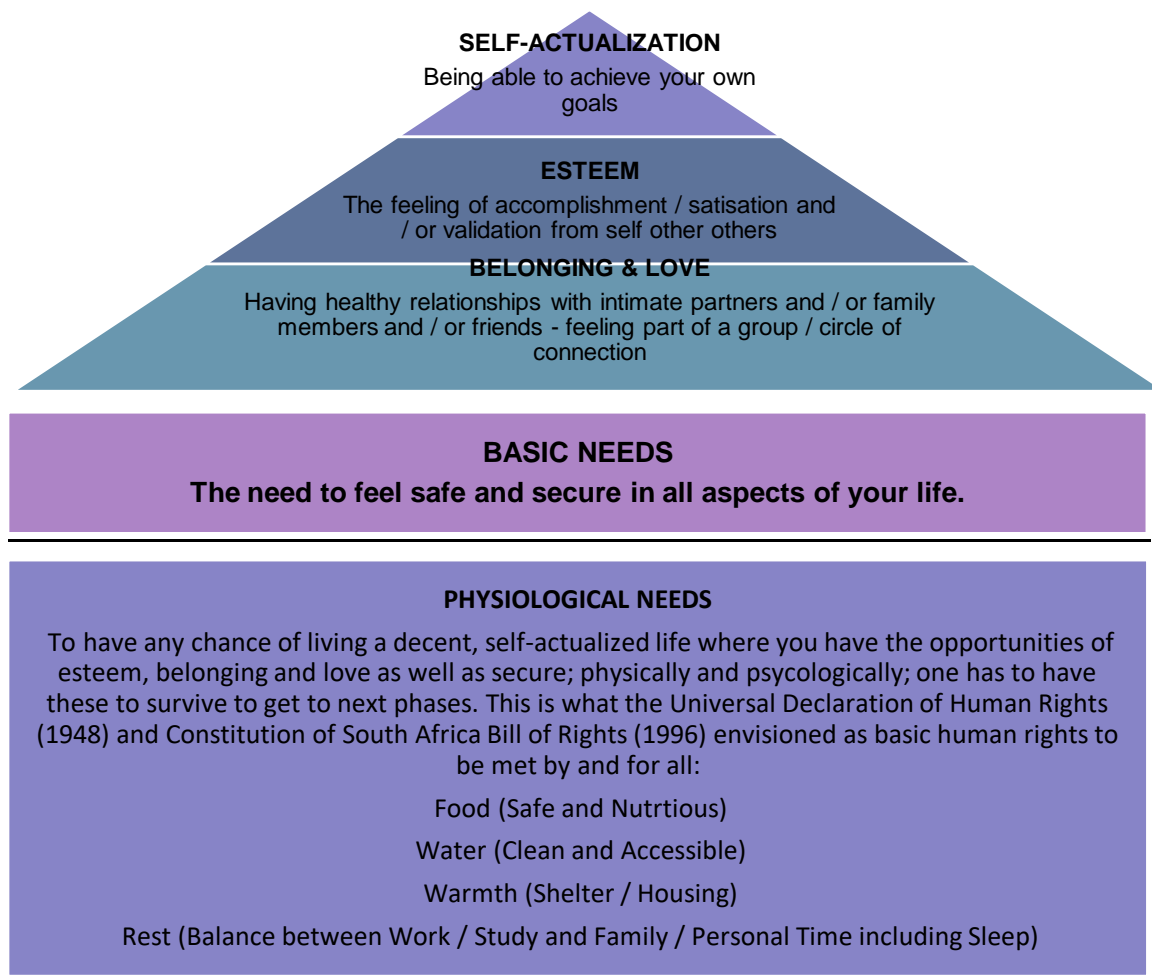


Figure 2.3.3 My Interpretation of Maslow's (1943) Hierarchy of Needs

2.3.4 Economic Implications

Ledger (2016) and Pereira (2013) used economics within the broader food system that included food safety to motivate for it being a higher policy priority. In turning the focus to the rationale for prioritising FSG, Ledger (2016) argued for a systems-wide approach to food policy governance in South Africa when considering governance, actors, influence and power relations as well as the importance of food safety. On the one hand, they acknowledged the detrimental damage foodborne illness or poor governance had. On the other they recognised that food was in fact big business in South Africa thus another reason FSG was key. Stoker (1998) had earlier recognized that there would be inevitable power dynamics between the actors of whom he stated within governance were to be both government and nongovernmental, in this case large business corporations.

Citing Chikazunga and Paradza (2012, as cited in Ledger, 2016) Ledger claimed that the government viewed FSG as a low priority as per 2012 estimations, the agri-food system contributed roughly R150 billion to national gross domestic product (GDP). The Stats SA (2000b) Report on Employment Trends made it clear that agricultural jobs and income generation cannot be seen in isolation as they are linked across trade and development sectors making it a significant player in big business. Government's acknowledgement of this and approach to capitalize was made evident in Vision 2030 and the National Development Plan in addressing the impact of the 1913 Natives Land Act that dispossessed people of colour from their land.

Olanya et al. (2019) saw the economic repercussions of the listeriosis outbreak as multidimensional. It was not simply loss of contribution to GDP or costs to a public health sector already overburdened. They started with the loss of life and this impact, social and economic, on the families. Added were lower production output as individuals were sick or attending to their sick. This affected personal income loss but also business productivity loss. From government came the public health response, containment and initiatives to prevent such a large-scale outbreak. For the poultry and processed meat industry, even the non-Enterprise brands, it was a loss of income and unplanned expenditure to meet new public standards and rebuild trust. For them however the highest cost of this, only one foodborne disease was within the infected and fatalities; 42% were neonate infants – babies 4 weeks and under. Overall, the 204 fatality cases were estimated to have had a cost implication of US\$ 240 million. public health care over US\$ 10 million and at least US\$ 15 million in lost productivity. Grace (2015) supported this view but in terms of foodborne illness as a whole whose economic impact included productivity loss, product recalls and the cost of additional food safety governance protocols; adding that in the USA alone, this cost an estimated 15 to 80 billion annually, depending on the extent of foodborne illnesses in a particular year.

2.3.5 Balancing Governance: Horizontal versus Vertical and Central versus Self-Steering Government

Though there were differences on whether food safety governance should be horizontal or vertical; central or self-steering; or a hybrid; all agreed that governance included both government and nongovernmental actors. According to Kuronen and

Caillaud (2015) who used examples from the EU; vertical governance has three layers of policymaking actors in government – national, regional (provincial in RSA) and local but it was coordinated with final decision-making authority centralized at the top being national government. Mertens (2020) cautioned that government had an institutionalised chain of command making horizontal governance a challenge in RSA. Pereira and Drimie (2016) viewed government as only one of the actors who centrally steered horizontal governance. Horizontal governance according to Ferguson, Phil and Burlone (2009) can occur in a single organisation, multiple partner organisations and across sectors where there is cross-functional coordination, contribution and shared responsibility between government and nongovernment actors. Scout and Jordan (2005) addressed central and self-steering within the context of the EU. They stated that central steering accompanied vertical governance where the national government coordinated and solely made policy decisions with nongovernmental actors serving in an advisory and consultative capacity. Self-steering or self-regulation was based on network governance with actors having specific responsibilities and coordinating policy and decision-making impacting on their network.

Stoker (1998) was clear that governance was not government thus it could not be a vertical monolithic player in any type of governance. By the same token, Anderson (2011) was unambiguous in his view that government was the only policy actor that had the authority and legitimacy to make binding decisions about what Jackson and Jackson (1997) referred to as who gets what, when and how. McMahon (2013) argued that FSG needed to return to its political roots as opposed to often narrow technological focus on food safety without the key governance aspects. Mayett-Moreno and Lopez Oglesby (2018) agreed and argued that food safety was intrinsically embedded in public policy and the governance thereof.

Ledger (2016) recognized the deregulated nature of South Africa's food system, much as Korsten (2018) did too. She further stated that this system of deregulation had failed and could be plausibly seen to contribute to the very failures it was designed to originally address. Boatemaa et al. (2019) also agreed that the FSG system in 2017/18 was self-regulatory, lacking a single central authority and thus reliant on corporate private actors to be responsible to conduct audits, training, testing and consumer education reviews. Their findings supported the initial anecdotal view that

even where education and enforcement occurred, it was poorly coordinated between the three major responsible government departmental actors thus though not in legislation, increasingly in practice, private actors had become the main horizontal, self-steering FSG actors. Ledger (2016) argued that the danger of this type of policymaking was legislation restricted the government from intervening in the market sphere to steer where necessary towards socioeconomic redress. Ledger (2016) explained that policymaking needed to be understood in the context of actor linkages and power relations. Citing Liverman and Kapadia (2010, as cited in Ledger, 2016), she advanced that the more complex a food system became, the more governance systems mechanisms needed to be amended to reflect these changes and keep abreast of them. The complexities needed to broaden inclusive and balanced actor participation. Like Ledger, Pereira (2013) acknowledged the important role nongovernmental actors had to play in governance, in agreement that power relations were not equal, notably big business private sector actors had vested interest to create rules that favoured their own position due to their economic contribution to GDP.

2.4 Food Safety Governance Actor Gaps

The scoping literature review identified the need for a mapping exercise. One such literature source which supported this was Boatemaa et al. (2019) who in their own study reviewed 74 texts including public documents, corporate reports and media articles to analyze the state of food safety governance in RSA. Smit (2016) who though focused on urban food governance as a whole, stated that there was unexpectedly too little research in this area, given the critical role governance actors play in the success or failure of matters of public interest. For him, a better understanding of the actors could lead to more coordinated interventions. Battersby and Haysom (2018) wrote that the lack of proper governance actor roles and responsibilities created gaps that resulted in the most marginalized bearing the highest cost. Donnely (2018) supported this view that FSG was disjointed with loopholes in or non-existent legislation and no clear actor map. For Kieraziva and Luning (2017) FSG had an increasing number of actors, but their roles and responsibilities were not well defined, impacting on the outcome of FSG.

2.5 Food Safety Governance, Actor Gaps and a Food System Approach including an International Overview

In looking at FSG, Tremeer et al. (2017) thought it best to view it as part of a food system encompassing all activities relating to the food value-chain from produce to plate, including safety aspects; all at both a formal and informal level. They argued that the food system approach best presented the opportunities and threats within food safety governance. McMahon (2013) also saw FSG within the framework of a food system, whose deficiencies contributed to challenges within the FSG sphere. Another advocate for a systems-wide approach, Ledger (2016) stated that policymaking needed to be understood in the context of actor linkages and power relations. Wilkinson (1989) further advocated that given the gaps in what was known about listeriosis and other foodborne diseases, a system of FSG was required. Supplementing the need for proper systems in order the constitutional right to access food to be met, such stems needed to acknowledge that public health is a human right and not a commodity (Rowe and Moodley, 2013).

2.6 Chapter Conclusion

Korsten (2018) is on record that the scientific community knew that there were multiple gaps in food safety governance in RSA. The Minister of Health at the time acknowledged a few flaws (NICD, 2018a). Within the academic subject experts (Boatema et al., 2019, Korsten, 2018, Smit, 2016) there was an acknowledgement that a foundation gap in FSG was an actor map, which this dissertation addressed, with upfront understanding of the limited topic literature in the South African body of knowledge on the main actors in FSG.

CHAPTER THREE (3): RESEARCH DESIGN

3.1 Chapter Introduction

The University of Pretoria appointed its first African Black Vice-Chancellor and Principal in 2019. Professor Tawana Kupe (University of Pretoria, 2019) stated on assumption of office that the university’s research needed to be aligned to societal needs. He specifically said, ‘Our research must continue to address the issues that are most pressing to the communities in our country and on our continent. These include achieving food security, addressing climate change, unemployment and poverty, inequality and violence. T.S. Eliot (1942) who not referring, of course, to a dissertation, especially not its research design; wrote in Part V of Little Gidding prose that made a poignant point for me in designing the research for this study. He wrote that ‘What we call the beginnings is often the end. And to make an end is to make a beginning. The end is where we start from’. The research design informed the examination of this topic with the end being to produce a food safety governance actor map and the beginning to understand and review the existing body of knowledge in the RSA socioeconomic transformation worldview mainstreamed with regards to food safety governance against the backdrop of the 2017/18 listeriosis outbreak. This dissertation’s research approach interpreting the poem is shown below as 3.1(a).



Figure 3.1 Circular Approach to this Study as Inspired by the Poet T.S. Eliot (1942)

To start, the general view of governance on which this study was premised is as per Pierre and Peters (2000) concept that it is not definitively agreed on by either scholars or practitioners of the subject, probably due to an interpretation used here of what Stoker (1998) indicated as the misuse and / or incorrectly interchangeable terms of government and governance. Like the contested nature of politics still was two decades ago, Pierre and Peters (2000: 7) stated that ‘the concept of governance is notoriously slippery; it is frequently used among social scientists and practitioners without a definition all agree on’. What was clear for Rhodes (1996) was that governance should not be used as a replacement word for government. Rhodes (1996: 652) stated that governance ‘changed condition of ordered rule; or the new method by which society is ruled’.

For the purpose of this research, government and governance are linked notions but not the same in practice. The definitions are informed by the Merriam-Webster Online Dictionary with government being the institution that has legitimate authority to exercise over a state (2020b). Stoker (1998) wrote that governments were formalized institutions, operating at the level of a nation state that could undertake authoritative decision-making and enforcement. Governance is the act of carrying out government functions through processes of control and direction (Merriam-Webster Online Dictionary, 2020a). Stoker (1998) continued that governance was about the conditions required for orderly rule and collective action; that is beyond government itself. For Stoker (1998) an emerging new interpretation saw governance as a collective action for ordered rule, which is not unlike government in purpose, but in process.

My research results emanated from my methodology and methods as per the direction of Annesly (2010). Initially my approved ethics proposal included a more practical participatory approach with focus groups and one on one key informant interviews; however as with our day to day lives, I had to change my research design due to COVID-19 (WHO, 2021), which has had positive outcomes in more engagement with a broader amount of literature. Influenced by the working paper of Lee (n.d.), the nature of my topic called for a qualitative approach as I was addressing “how” and “who” questions within a specific context, which was my research aim to map the main FSG actors based on the question of their roles, responsibilities and linkages against the specific background of the listeriosis outbreak in RSA. In terms of Elliot’s thinking,

I started with the philosophical worldview and moved to governance, research design, qualitative approach, methodology and methods; only to have ended to begin practically application to determine the results with the discussion both ending the research but opening a door for new academic paths in this subject matter.

3.2 The Research Design

Bloomberg and Volpe (2008) recommended that research designs show a coherency of approach from starting from the problem statement to using methods to determine results and culminating in a conclusion. Research designs direct the way we gather and use evidence that paves the way of research from purpose to results (Akhtar, 2016). Mannheim (1997) explained that in working through and selecting a research design, one had to use one's vision to develop a plan with an end game in mind. Trafford and Leshem (2012) agreed that research must be conducted with a clear research design that uses the topic to determine the responses to the famed Kipling Questions. These questions were adapted from a story by Kipling (1970) entitled "The Elephant's Child". In selecting my research design, I looked at:

- What I wanted to find out – who the main actors were;
- Why I wanted to find out – to potentially improve aspects of food safety governance as this was a substantive literature gap;
- When the topic under investigation took place - 2017/18;
- How will I research the topic – qualitative desktop literature review
- Where is the topic located and to be explored – RSA, desktop literature review
- Who will provide the data required – primary and secondary literature sources

With this in mind, I visualized my research design blueprint that was selected by iteratively reflecting on the topic problem statement, question and aim with the process illustrated in Figure 3.2.

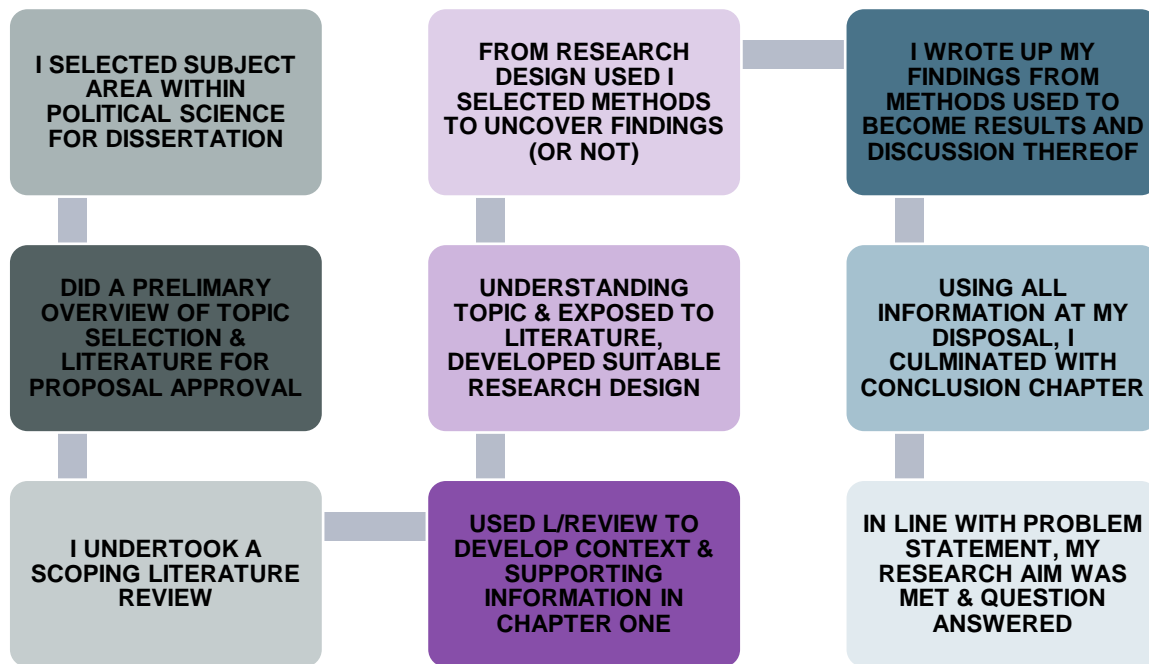


Figure 3.2 Process Flow to Reach my Research Conclusion

3.3 The Philosophical Worldview

3.3.1 Introduction to Philosophical Worldviews

A philosophical worldview was to DeWitt (2010) what a jigsaw is to many – a set of inter-related pieces that fit together as a system. Naugle (2002) used a fictitious story written by C.S. Lewis of a magical land called Narnia to underscore that your choices are determined by where you stand in the world and from what vantage you look at it. Lichtman (2014) linked Maxwell's (2005) iterative qualitative approach to the methodology; here a literature review was selected for this study and noted that it was analyzed through my critical (transformative) worldview, positionality and reflexivity.

3.3.2 Ontology and Epistemology

The Oxford Dictionary (2010) stated that ontology deals with the nature of being or existence; highlighting the properties or relationships of a particular subject. Gnoli and Poli (2004) asserted that ontology is the model in which knowledge is organized. The Stanford Encyclopedia of Philosophy (2005) described epistemology as the study of knowledge itself and the justification in the belief of that knowledge. For Marsh and

Furlong (2002) ontology preceded epistemology as ontology consists of the nature of being, in other words, whether a real world exists beyond our knowledge, whilst epistemology builds on ontology's view of the nature of the real world to what we actually know and how we know it. As for Guba (1990: 17) it is 'a basic set of beliefs that guide action'; hence my belief that evidence-based research can go beyond dusty hallways into society as per the speech of Tawana Kupe, the Vice Chancellor of the University of Pretoria (2019) who recognized that our research must address the issues that are most relevant and required by our communities.

3.3.3 Positionality, Reflexivity and Dimension of Position

Marsh and Furlong (2002) moved further and acknowledged that each researchers' work is shaped by their ontological and epistemological position, much as Rowe (2014) insisted that positionality affected all aspects of research design. She stated that positionality referred to the researchers' position within the social and political context of the study. My position is that of a socioeconomic justice activist or per Western prescripts, a critical theorist, who believes in transformation starting with government systems, processes and human resource structure, all linked to governance to effect the first wave of significant change. For the purpose of this study, I acknowledged my positionality of government to governance system reform, government having a central role to play but within a new social compact of governance by the people as per the Freedom Charter outlined in the Department of Education (2005).

Lichtman (2014) moved beyond positionality, which is rooted in philosophical worldview to reflexivity that includes philosophical worldview but only as one of three components, the other two being the researcher's personal values and the ethical issues, outside the researcher's control: that of the subject matter under study. Corlett and Mavin (2018) affirmed that reflexivity was important in qualitative studies. Alvesson and Skoldberg (2009:8) distinguished between the conception of reflexivity and reflexive stating that 'reflexive empirical research as a particular specified version of reflective research' whilst Hibbert (2013) saw the purpose of reflexivity to iteratively think about our approach. According to Mills et al. (2010) iterative thinking in research is systematic and repetitive throughout the study. Cunliffe (2010) clarified that

reflexivity was questioning our understanding of knowledge, our relationship to the research and how we determined whether the research is valuable or not. These views on reflexivity within qualitative science, advocated also by Cousin (2010) and James and Vinnicombe (2002) see the subjectivity to a limit but understands it to enrich the connectivity of the researcher to subject, with small bias not negative to rigorous research.

Linked is the dimension of position which questions to which degree the researcher is an insider or outsider looking in on the study. Herr and Anderson (2014) created a continuum with six positions the research could be placed in, starting with an insider and ending with an outsider, with mixing degrees in between. The outsider like me tends to gather information more traditionally, as per my literature review methodology. Added, my reflexivity is directly linked to my positionality and thus where subjectivity does exist in this research; I am in political terms a social democrat or in academic terms, a critical theorist, seeking to overcome South African inequity. Lichtman (2014) was comfortable with such a position that subjectivity will always exist, but the point is to acknowledge, minimize and move on, as was the case here.

3.3.4 Transformative Philosophical Worldview

Schutte (1993) contemplated the philosophical concepts of ontology and epistemology through an African perspective. He emphasized that the Anglo-Saxon approach to political philosophy was clinically scientific and technological. By these very virtues, it reinforced colonial constructs as it did not sufficiently acknowledge local context. Its dependence on the natural sciences, failed to be cognizant of the social sciences, which was necessary for an ontological and epistemological worldview of political science in Africa. This study linked the African philosophical work of Schutte (1993) with the researcher's transformative worldview which in South Africa is often connected to a post-Apartheid socioeconomic justice positionality. Maldonado-Torres (2007) stated that Frantz Fanon was a leader in Third World and decolonized theory. Informed by the work of Fanon, Maldonado-Torres explained that decolonial thought explored both the impact and significance of colonialism and the arguments for decolonizing the systems and socioeconomic constructs of colonialism. The Nobel Peace Prize winner, Maathai (2009) wrote that the leadership challenges in independent Africa,

could be attributed to amongst other factors, colonialism and post-colonial governance structures. Maathai further explained that the Berlin Conference of 1884/5 in which European powers carved up Africa, resulted in the skewed development of Africa to promote European dominance by using Africa's raw materials to drive their industrialization. These colonial administrators created African collaborators who assisted to undermine indigenous governance systems. To retain influence post-colonialism, European powers supported collaborators who inherited colonial systems they were ill-equipped to manage due to colonialism not promoting education or skills development amongst local leaders. Maathai (2009: 30) underscored this lack of governance capacity by stating that 'when Zambia achieved independence in 1964, there were only about a hundred university graduates in the country'.

Fanon (1959) in his seminal work on decolonial thought, "A Dying Colonialism", advocated that independence was not a gift from colonizers to be continued in form by post-colonial independent leaders. Based on Algeria's independence, Fanon insisted that transformation could only be successful if the colonial systems were overthrown and rebuilt for local context. The ontological and epistemological point of departure of this study is the advocacy of transformative, critical theorist thought in governance, notably within this research area of FSG. The study does not delve into decolonization, but upfront acknowledged that a rethink of the state itself and the social compact is ultimately required for food safety to be given the priority it requires as the physiological base of socio-economic justice importance.

3.4 The Governance Conceptual Framework

3.4.1 Conceptual Frameworks

Miles and Huberman (1994: 18) described a conceptual framework as that which 'explains either graphically or in narrative form, the main things to be studied – the key factors, concepts or variables – and presumed relationships amongst them'. Maxwell (2005) expanded the definition to include the researcher's specific ideas and beliefs about the phenomena being studied. He clearly articulated that a conceptual framework needed to be understood as a model of the who, why and how's of phenomenon under investigation. Raviton and Riggan (2011) asserted that conceptual

frameworks were an apparatus for the position of all the components within the research design. They advocated that a conceptual framework not only framed the research subject but was a process to be followed within the research design. McGaghie et al. (2001) specified that a conceptual framework drove the investigation to answer the research question. Grant and Osanloo (2015) supported this assertion having explained that a conceptual framework is like a structure of an architectural design, without which a house cannot be built. This structure is used to guide the research investigation stage by stage, chapter by chapter. The blueprint of this study is the research design, the transformative philosophical worldview is the foundation and network governance framework the structure, mainstreamed through from Chapter One to Five.

3.4.2 Governance as a Conceptual Framework

Much like Stoker, Pierre (2003) noted that besides application, governance was a conceptual framework. Jessop (1996) explained that governance as a conceptual framework was disjointed in academic literature. Stoker (1998) indicated that a governance conceptual framework was useful to understand current governing. Judge et al. (1995: 3) supported this view and commented that 'conceptual frameworks provide a language and frame of reference through which in reality can be examined and lead theorists to ask questions that might not otherwise occur'. They continued that 'conceptual frameworks can constitute an attempt to establish a paradigm shift'. In line with this thinking, Stoker (1998) declared that governance conceptual frameworks helped to identify and answer these of which here network governance was specifically selected to do.

3.4.3 Network Governance and Power Relations Conceptual Framework

Peters (1998) explained that network governance served as the most used and useful classical application within the governance model. For him, network governance was broader than government and other actors but rather a collection of actors working together to achieve an aim or collaborate on an issue. In all cases network governance is characterized by multiple actors whether subject to government involvement or not.

Bryant (2018) notably wrote of the improved coordination and outcomes possibilities if government was an actor amongst other actors within governance processes given that the praxis of governance would best serve government through these networks. Pierre and Peters (2000) advanced that networks comprised of several governmental and nongovernmental actors who worked together to depending on the issue, formally or informally proactively or reactively address. Aligned it was advocated that there was an increasing number of governance actors (Wollman, 2008) and as such he called for better government coordination to include all governance actors in the policymaking processes. Peters (1998) also advanced that with a growing volume of actors; if governance was to be more inclusive given the trend towards decentralization of certain functions, government had to expand its coordination capabilities. Kohler-Koch and Rittberger (2006: 34) explained that network governance was distinguishable by virtue of the state engaging both vertically and horizontally beyond authoritative allocation to including being an 'activator'. Wollmann (2008) supplemented that such improved government coordination was both vertical and horizontal governance.

Network governance incorporates the question of whether governance should be centrally or self-steered. Rhodes (1996: 660) specifically defined governance as 'self-organizing inter-organizational networks'. Kooiman (2003) supported Rhodes and insisted that government interference would actually be detrimental to the success of the network. Others cautioned sole self-steering like Kickert et al. (1997) who saw network management as a necessary component of network success. Schout and Jordan (2005) noted that especially where policy challenges were of a cross-cutting nature, self-steering could be redundant in achieving policy success due to differing interests and aims. Klijn (2001) stated that self-steering was not necessarily negative however certain circumstances did require a centrally steered approach. Klijn and Koppenjan (2000) stated that the central role was not necessarily automatically to be assumed by government, but often was in practice due to government's broader resource and legitimacy base.

Tantivess and Walt (2008) argued that with an increased number of actors, network governance was the best option to mobilize and exchange resources such as finance, subject expertise, and capacity to maximize stakeholder interests and produce

outcomes that are reciprocally agreeable. Network modes of governance encouraged collaboration of governmental and nongovernmental actors to develop and execute policies through beneficial leveraging of resources (Cohen and Horev, 2017). To achieve the building blocks of network governance Wollmann (2008) noted trust was tantamount with Shearer et al. (2014) augmenting the application of stakeholder relations. Together they could lead to government being more willing to establish network governance, which advantageously was more consensual than conflicting in policymaking (Smith, 1993). Marsh and Rhodes (1992) cautioned that whilst horizontal governance introduce more, new policymakers who could add innovation and fresh interpretation or approaches; the processes itself need to be changed to accommodate this benefit otherwise the policy agenda remains in the hands of the few, powerful actors who interests might conflict with the new actors and thus attempts at inclusive “window dressing”. This is as power is a concept within most networks (Covrubias et al., 2019). Continuing he stated that there are four dimensions of power within a network which includes networked power, network power, networking power and network-making power. Networked power within governance actors relates specifically to domination of leveraging, notably in vertical governance. Clark et al. (2021) warn that such power imbalances can be challenging for the management of food systems. Zerbian and de Luis (2021) added that research on FSG needed to include power dynamics as it impacted on the outcomes of the governance measures undertaken. Duncan and Caleys (2018) stressed that within a food system communication was critical to overcome power imbalances as those most affected by governance actor decisions needed to be at the forefront of input going into that decision-making process.

3.4.4 Governance within Political Sciences

Framing studies within governance is not new to the political science domain. Paul-Wastl (2009) addressed water governance in terms of political governance regimes and Newman (2005) also linked governance with politics as she used political science theories to explore governance in terms of an active citizenry. Gorg (2007) noted that whilst governance was increasingly being used across the social sciences, it is intrinsically embedded in political processes, including the spatial dimensions of politics, since political theory co-exists with developmental studies, particularly as

advanced by agencies such as the World Bank. Patterson et al. (2017) advocated that both governance and politics were central to sustainable global transformation. Additionally, Sabatier (1991) advocated that policy making within political science had four core purposes namely to delve into a specific subject area, this here being FSG; evaluation and impact which this study did against the background of the 2017/18 listeriosis outbreak; policy processes which this study looked at from the vantage of the main FSG actors and policy design which this study didn't research in detail except where governance lessons were learnt in the process of actor mapping.

3.4.5 Governance and Good Governance

Most of the governance literature over the past three decades has emanated from actors in the European Union (EU) and tend to be of an Anglo-Saxon perspective. This was as Hix (1998) illuminated the EU had multiple sets of government and nongovernmental actors over a growing and consistent period. Mkandawire (2007) wrote specifically on good governance and the traction the concept of framing development within governance was being driven by international aid donors and organizations such as the World Bank. Likewise, the Worldwide Governance Indicators according to Kauffman (2019) focused on governance indicators for over 200 countries which in this case unlike the World Bank's data was intentionally co-produced knowledge between the private, public and nongovernmental sectors. Goldsmith (2012) wrote that international development strategy promoted good governance which included indicators such as transparency, accountability and inclusive participation. Afegbua and Adejuwan (2012) emphasized that weak governance in Africa was due to African leadership failures, often in turn due to inheriting and simply continuing with ill-equipped systems for post-independence governance. This was Maathai (2009) postulation of the governance challenges facing Africa. Adding to the governance work of McFerson, Asongu (2017) conducted a study of governance across 51 African states. His focus was the effect of globalization on African governance. He argued that overall globalization had a positive impact, especially in African countries with low levels of political governance to start with. Witt (2019) considered the on the ground impact of the adoption of the African Charter on Democracy, Elections and Governance, which twelve years after adoption appeared to only be successful when approached from a more inclusive, 'bottom-up' policy

stance. The Malabo-Montpellier Panel (2017) summarized that in Africa sustainable food safety is impossible without good governance.

McFerson (2010) acknowledged the 57 indicators of good governance developed by the Mo Ibrahim Foundation but cautioned that many of these indicators were not sufficiently linked to governance in itself and thus she argued that for the Ibrahim governance index to be better locally contextualized for African practical reality rather than measurements based on Western process and outcome indicators. Bettcher (2017) also cautioned against blanketly following good governance constructs that were not aligned to reasonable benchmarks for developing countries and emerging economies, such as those in Africa. Wachira (2020) noted that there wasn't a resistance to good governance as it was mainstreamed throughout the AU Agenda 2063; it was more the Western imposition without taking African actors and their solutions into significant account.

3.5 The Qualitative Approach

According to Lichtman (2014), an approach is the way in which you choose to conduct your research. The approach is a design lay-out underpinned by a worldview, framed conceptually and researched methodically through appropriate methodology and methods, being the details of the how. It is directly linked to the philosophical and conceptual framework in that the "how" of the research is influenced enormously by the "why". She drew attention to the fact that within the "how" there were in itself two approaches. One advocated by the likes of Olesen (2011), who focused on feminist philosophy and argued that a research approach should be placed squarely within the philosophical or conceptual framework and the other opinion such as that of Flyvbjerg (2011) who adopted a more pragmatic approach that proposed the 'how' should be more practical. I agreed with Lichtman (2014) and Creswell (2014) that a qualitative research approach was not necessarily as binary as oft pronounced and could be flexibly adapted to provide a responsive and meaningful answer to the research question. Lichtman (2014: 5) continued on what she viewed as the qualitative approach. Its purpose was to 'describe a phenomena, explain a culture, explain a case, search for an emerging theory, understand a lived experience and take action to change a system'. The approach thus informed the choice of the research

methodology which in turn is the map for conducting the research or as Denzin and Lincoln (2011) advocated that it was a strategy of how to investigate the research question and meet the aims.

For Willis (2007) within qualitative research lay further approaches demarcating paradigms of what one such as myself might label dogma. Lichtman (2014) wrote that these paradigms tended to fall broadly into three camps; namely traditionalists otherwise known as post-positivists and non-traditionalists, also called postmodernists. Traditionalists strive for structure and rules, whilst postmodernists seek more innovative takes to theory and practice. Still a third category, which I argue my transformative philosophical worldview placed my research in, is that of a critical theorist whose approach was transformative hence as per Mertens (2010) FSG was for me a political issue and a socioeconomic justice one at that in RSA, given that those most affected by food choice are the marginalized in society. The Stanford Encyclopedia of Philosophy (2005) states that critical theorists seek to transform society with the approach being broad given the wide extent of its aim to free humans from all forms of slavery. Here Sandelowski (2004) echoed my sentiment that research, especially qualitative research, generates knowledge of human beings lived experience, which without a doubt, the listeriosis outbreak was for those who contracted or died or their families, lived this terrible experience due to a foodborne disease. Transformative (critical) theorists even where methodology is otherwise, tend to contain elements of action research. Trafford and Leshem (2012) saw the use of a literature review using multiple, good sources that could describe the phenomenon under study and develop theoretical or more usable solutions to bring about transformation in that area of the topic.

The qualitative study used a traditional scoping literature review in that it 'aims to present a summary review of the current state of knowledge about a particular subject' (Torgerson, 2003, cited in Jesdon et al, 2011: 74). A scoping review was exercised to sift purposively and swiftly what is known to identify gaps for further research, which here resulted in creating a map of food safety governance actors. It is brought to the fore that there was a measure of subjectivity when conducting the literature review due to the scope of document selection, but as Lichtman (2014) addressed,

subjectivity is not bad in itself, as long as it is initially recognized, and the information iteratively thought of to minimize bias of study outcomes.

3.6 The Methodology

As noted above the study had a qualitative approach and thus the selected methodology was a desktop literature review. Jesdon et al. (2011: 74) wrote that 'a literature review is a desk-based research method by which the researcher critically describes and appraises what is already known about a topic using secondary sources', which Grant and Booth (2009) emphasized were published materials in the public domain. Qualitative research methodologies varies though Snyder (2019) relates a literature review to that of knowledge production, both of which must have a solid foundation. She suggested that the literature review is fast becoming more accepted as rigorous methodology, as it is better able to stay up to current information, selecting only information required to shorten an unnecessarily long process and use the extracted information to develop themes, which later are used to respond to the study aim through the methods in the Results Chapter in a thematic manner. This foundational approach of literature research being the base to develop a thorough understanding of the topic which informed what methods to use later to produce the results was supported by Webster and Watson (2002).

The use of a scoping literature review was swayed by the words of Pham et al. (2014). They informed that this methodology focused on gathering smaller but more specific information relevant to the topic, determining what existed and what could be built on. The process was not to build another layer of foundation of what was already known but to analyze, seek gaps and determine where to build given the transformative worldview (foundation) and network and power governance conceptual framework (structure). The selected methodology was a scoping literature to understand the existing subject body of knowledge, particularly within RSA and identify gaps. Sucharew and Maculuso (2019) compared systematic to scoping literature reviews, the latter of which I selected for my methodology. Perceiving that scoping reviews were relatively new, they motivated it was a good choice for having an overview of the literature if you were specifically looking for information related directly to your topic, within the body of knowledge, giving you an understanding without answering the

research question. Brien et al. (2010) compared scoping to systematic reviews and I construed it in Table 3.6.

| SCOPING REVIEWS | SYSTEMATIC REVIEWS |
|---|---|
| Research Question(s) can be broader | Focused Research Question |
| Parameters of Review may change during process | Review Parameters Set |
| Quality Filters not an Initial Priority | Quality Filters Applied Upfront |
| Data Does Not Need To Be Extracted But Reviewed | Comprehensive Extraction of Data |
| Typically for a Qualitative Approach | Typically for Quantitative and Mixed Methods Approaches |

Table 3.6 Comparison between Scoping and Systematic Reviews

Of importance is that the literature review methodology, including a scoping review, is not the same as the documentary analysis, which is one of the selected methods (McCombes, 2019). A literature review broadly engages the existing body of published knowledge to understand the topic and identify gaps if any, whereas the documentary analysis is methodically analyzing documents to produce the study results. Instead McCombes (2019) advised that a literature review should be structured to connect the main trends and arguments of the existing literature in line with the research question. The scoping literature review used here was not conducted in any way to meet the dissertation aim or answer the question upfront but rather to create a subject understanding for the in-depth study method of documentary analysis which together with the two other methods produced the dissertation results (Suchorew and Macaluso, 2019).

3.7 From Methodology to Methods

The scoping literature methodology lent itself to the views of Creswell (2009) regarding the selection of the three methods of purposive sampling, thematic and documentary analysis captured below. As in the case of this dissertation's second method of documentary analysis; the scoping review was conducted purposively by selecting

targeted primary and secondary sources that were within the closest range of my subject topic area. Reflecting on Freire's (1970) study, it advocated that exploring the balance of power, in this case of food safety governance actors, allowed for the determination of mapping, linking, identifying points of leverage, all of which could potentially be utilized to point to of the selected methods from one, purposive data sampling, to two and three of documentary and thematic analyses.

From the start it was imbued that the three methods – purposive sampling, thematic analysis and documentary analysis were in this dissertation inextricably linked to each other and their methodology of a scoping literature review. They are not what in research is oftenly referred to triangulation (Denzin and Lincoln, 2011) but still each method reinforced the study – the what to the why to the how to the circular process of back to the problem statement, question and aim. The purposive selection determined documents for analysis, thematic analysis set out the categories of results I searched for within the documentary analysis providing the detailed information to analyse to determine results and discuss accordingly.

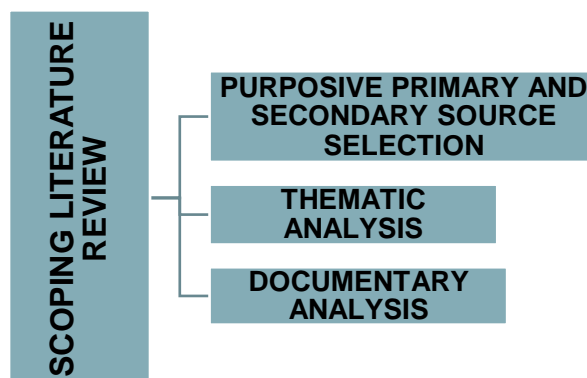


Figure 3.7 From Methodology to Selected Methods

3.8 The Methods: Purposive Data Sampling

Tongco (2005) advised that purposive sampling was an excellent manner to withdraw information directly required within your subject area to know quickly but adequately who and where your best information can be found. Gentles et al. (2015) suggested that purposive sampling was probably the most used through the qualitative sciences.

Palinkas et al. (2015) agreed that purposive sampling is a method that is used throughout the social sciences to identify the sources which were likely to be as close as possible to the research aims and context as possible. For Patton (2015) purposive sampling encompassed in-depth study. In contrast, Yin (2011) focused on selection to be based on the information relevant to answer the research questions. For Serra et al. (2017) whilst open to subjectivity, selecting smaller amounts of documents where initial reviews give indicators are purposive can be done if correctly maximizing the knowledge sought. This is the purposive method used in this dissertation. Lavrakas (2018) found purposive sampling to be subjective in it specifically identified sources that had a high probability of providing an outcome on the research topic under study, which I acknowledge given my positionality and reflexivity but advance it is balanced by using methods correctly.

Despite the differences of opinion on purposive data sampling it is well interlinked to documentary analysis and thematic analysis. For example, O'Leary (2014) had a documentary analysis process that included elements of purposive sampling, proposing eight steps for conducting a documentary analysis of which purposive sampling was a part of. Using tips from Enago Academy (2021) I used my key research words and identified literature in content and source most likely to produce useful information on FSG gaps and the main actors. The selection of the topic was based purposively on the problem statement that I as an adherent of Covey (1990) advocated putting first things first thus I explicitly targeted primary and secondary sources on multiple platforms that provided different insight to FSG actors in 2017/18. They were set out to practically show the modernized approach by thematically dividing the source origin whilst the title indicated the content. This is in line with the Dudovskiy (2020) explanation of purposive sampling that the researcher subjectively selects the documents with a high probability of relating to information of the subject topic including the amount thereof.

At this point, it's appropriate to be reminded of Glatthorn and Joyner (2005) who cautioned that in academic writing it's necessary to distinguish between primary and secondary sources as one could misinterpret primary sources especially if used out of context to research credibility detriment. Secondary sources are interpretations or use of primary sources. The Virtual Information Literacy Learning And Growing

Environment (VILLAGE, 2006) based at the University of Illinois elaborated those secondary sources were not directly experienced but rather found in books, journals, articles etc. As stated by Bowen (2009) literature for documentary analysis included information from organisations' statements, reports, policy and strategic plans. This applied to governmental, international and local organisations of repute. Literature for analysis further included speeches, diaries, blogs, newspaper articles as well as information gleaned from social media, posters and brochures. Importantly included were government legislation, policy, regulations and official speeches, media statements and documents online or in print. This manner of using a wide range of sources outside of academic journals and books was in-line with my transformative worldview by modernizing governance systems including academic and here as applied to my research topic (Heleta, 2016).

Moreover, in selecting the documents, I paid heed to the governance conceptual framework and the study's transformative worldview that Patterson et al. (2017) motivated for genuine governance change, it required change in form, function and legislation of FSG. I did this by looking at content documents beyond research design that included research and commentary on governance, governance actors, FSG actors, governance network and power relations including in broader food systems and RSA socioeconomic realities. Tapscott (2017) cautioned meaningful change is challenging due to the current powers being held by government and big industry to the exclusion of other key actors. Lastly, I used the method in my sampling of selecting documentation until I subjectively felt that saturation point had been reached. Walker (2012) noted the importance of understanding within your topic and its body of knowledge, what data saturation point was, more so in qualitative studies. Saunders et al. (2018) stated that saturation point had increasingly become part and parcel of qualitative methodology. Saturation being where no further information was required to answer the research question and meet the aim. They warned that in practice it was more challenging to apply hence it was best linked directly to the research question with the scope clearly in place.

There was however becoming increased differences in what it was termed i.e., purposive, purposeful, etc. and what it encapsulated. For Patton (2015: 264) purposeful sampling was 'selecting information-rich cases for in-depth study'. Yin

(2011: 311) defined it as ‘the selection of participants or sources of data to be used in a study, based on the anticipated richness and relevance of information in relation to the study’s research questions’. Whilst Yin saw purposive sampling as different to other forms, Merriam (1998) saw it to be more inclusive and included snowballing sampling within purposeful sampling. Lincoln and Guba (1985) also supported the view that all samplings were to some degree purposeful in nature. Noting the ambiguities, Gentles et al. (2015) surmised that first, it created a challenge to box-in what was purposeful or not and second, that meant that researchers had to be very specific about what they meant by purposeful data sampling. Serra et al. (2017) added that purposive sampling was useful to support additional qualitative methods, provide research context and ease thematic interpretation. It is noted here that this dissertation used the term purposive data sampling.

Sampling units by which the data is collated was considered in terms of Glaser’s (1978) groups, Strauss and Corbin’s (1998) sample events and Charmaz’s (2014) people, events and information, with the third being selected as the sample analysis unit for this particular research. The literature selected was in my view best suited to qualitative approach, thus a smaller, more topic focused selection. For Merriam (1998) sample size was linked to the saturation point, which is impossible to determine at the start of the study, unless for general purposes such as research funding. In line with Kumar (2014), the selection of data was purposive throughout the study until in my subjective opinion review saturation point had been reached. In sum, the initial literature review scoped for data sources that were specifically targeted at FSG actors in South Africa during the 2017/18 listeriosis outbreak to identify research gaps. The documentary analysis was a method – a tool within results where purposive data selection was used to a more specific degree to answer the question and meet the aim. The selected data was for the purpose of analyzing not providing a further summary of existing body of knowledge.

As noted above the study is framed by governance conceptually and underpinned by a transformative / critical theorist philosophical worldview. Both are mainstreamed throughout from selection of information to interpretation and in how the dissertation in itself is approached including purposive selection of data. In academic writing, evidence-based, reliable and respected resources of information is critical, both

primary and secondary sources. Old-school academia tends to restrict to peer-reviewed journals and books, but transformative academia includes starting to change and expand the terminology and methods of the research (Trevors et al., 2012, Davis, 2018). This dissertation followed this line of thinking and used traditional and modern sources. In terms of the UCI Libraries (2021) primary sources included published books such as autobiographies, manuscripts, photographs, audio and video recordings, letters and diaries, speeches, newspapers and magazine articles published at the time under study, government legislation, policy and regulations, organizational documentation and original research data with secondary being interpretation or discussion of the primary source such as a journal article.

3.9 The Methods: Documentary Analysis

The documentary analysis method was selected as the most efficient and effective means to reach the results accompanied by the other two methods of the qualitative approach methodology of a scoping literature review that included a purposive data selection and thematic analysis; to create a holistic and comprehensive map of the main FSG actors at the time of the outbreak (Bowen, 2009). Documentary analysis allowed me to select the parameters of data best suited to this particular study's research such as time period, approach, type of materials and specific topics (Fitzgerald, 2012). For Ahmed (2010) a document is a written text that Lincoln and Guba (1985) are clear is not a simple exercise of noting and describing facts on the literature. Scott (1990: 34) purported those documents 'must be studied as socially situated products'. For Bowen (2009) it was a systematic process to review and evaluate documents to better interpret them for results. The documentary analysis whittled the information down further and set the scope to discuss the results per Grant and Booth (2009). Within this context, I argued that food safety and thus that of its governance documents as primary and secondary sources are a tool to understand a social context .

I understood Coffey's (2013) acknowledgement that documents cannot in isolation indicate functional operations or relationships and must be considered a constructed account as opposed to a completely factual one. In other words, the documents I purposively selected were used to establish a contextual setting with assigned roles

and linkages, which was useful to initially establish the main actors. For Corbetta (2003) documentary analysis was useful to independently study the past. Atkinson and Coffey (1997) saw documents as social facts and included a range that could be credibly analyzed through verifiable sources in the public domain. These include advertisements, agendas, attendance registers, meeting minutes, manuals, reports, unpublished and published papers, books, journals, diaries, letters, maps, memoranda and newspapers. This study analyzed documents specifically related to FSG from the advent of the 1994 democracy to date against the backdrop of the 2017/18 outbreak. Primary sources such as legislation and regulations were used. Secondary sources included journal articles, information from internet sites of reputable organizations, credible news articles working papers and reports. The research design outcomes were detailed in Chapter Four – Results.

3.10 The Methods: Thematic Analysis

The third method is thematic analysis which takes the separate components of data, organizes it according to a theme so that a higher-level strategic view of the topic is seen (Guest et al., 2012). Thematic analysis which Nowelle et al. (2017) argued was a method in itself was used to order, to interpret and discuss the results. Theme here refers to Vaismoradi et al. (2016) group of ideas incorporated in a single theme for easier analysis to illicit results later. Labuschagne (2003) had earlier advised the information was best organized per theme. Clarke et al. (2015) recognized that over a period of time, the concept and term of thematic analysis has been used interchangeably without an explanation of how the method was utilized. King (2004) supported thematic analysis as a simpler way to analyze information, which could be divided or arranged per theme. Braun and Clarke (2006) advocated that thematic analysis is a good fit for early career researchers such as me; in that it was more flexible with fewer strict methodological rules which I interpreted that themes are used differently within the results development. For me, firstly, the purposive sampling was done according to source to ensure practical mainstreaming of the transformative worldview and governance conceptual framework, specifically networks. Secondly, those sources were selected until saturation (Kumar, 2014) then arranged per theme according to the purpose of the dissertation and third, at a conceptual level it

addressed the results with the documentary analysis as supporting information for the discussion.

Practically applied, I used the thematic analysis at a high-level to focus on the dissertation results and conclusion having met the intended response to the problem statement (Alhojailan, 2015). I used the six application steps developed by Braun and Clarke (2006). First, I selected the data, read, re-read and read again whilst making notes. Second using my notes, I created hubs of information for me to process the content easier. Third I used the hubs of information by either dividing or combining it into a theme. Fourth I created a linkage map to double check that I had included all the information and accorded it appropriately to correct theme or sub-theme. Fifth after the check, I finalized the themes and sub-themes and their names. Sixth and last, I applied analysis to each theme and sub-theme using scoped, focused source and content evidence to develop result outcomes.

3.11 Chapter Conclusion

The research design was a fundamental guiding process to undertake the dissertation. It served as a map from the introduction to conclusion to adhere to the standard of dissertation research. Although COVID-19 attempted a roadblock from my original proposal, I was able to successfully turn the change in methodology and methods to the advantage of having a more in-depth documentary analysis, which turned out to be exactly what addressing this study required combined with the two other methods. This was possible by acknowledging but mitigating bias (Lichtman, 2014) to source and engage with desktop materials from a variety of sources and perspectives, which may not have occurred as intensively in the original pre-COVID-19 research design. The focus group could have been a possibility but due to hard lockdown, issues of data, permission without individuals being at places of work and importantly that the Net Map method was to be used, made it an infeasible option.

CHAPTER FOUR (4): RESULTS AND DISCUSSION

4.1 Chapter Introduction

I kept with a non-traditional, transformative approach throughout the dissertation and combined results with the discussion into one chapter. Chapter One: Introduction established the background of the 2017/18 listeriosis outbreak to highlight the challenges within FSG against the RSA socioeconomic scene. Chapter Two: Literature Review showed the importance of FSG as it linked far broader hence the identified gap of FSG actors was important to address through research. Chapter Three focused on the Research Design applied to determine results. Cohen and Horev (2017) suggested that the best way to understand actors was in the form of a networked map. They continued that such mapping showed actors how they were linked in the overall system, informally and formally, both government and nongovernmental, for resources to be leveraged based on enacted role and responsibility for mutual benefit. The question was “asked” to government and its institutions, private sector actors, other nongovernmental actors and international actors. As per Jackson and Jackson (1997) the “who” question accompanied by the proverbial what, when and how was addressed. The first three chapters established what this dissertation was about, how it had come about, what its purpose was, the justification for it, the context against which it took place and the manner in which the study was undertaken.

4.2 The Main Food Safety Governance Actors at the Time of the 2017/18 Listeriosis Outbreak

4.2.1 Government Actors

The Food Advisory Consumer Council (2019) identified three main national departments responsible for food legislation as the Department of Agriculture, Forestry and Fisheries (DAFF) which had subsequently been renamed to the Department of Agriculture, Land Reform and Rural Development (DALRRD), Department of Health (DoH) and Department of Trade and Industry (DTI). The Food Advisory Consumer

Council (2019) further noted that South Africa was a signatory to the Codex Alimentarius, co-developed by the FAO and the WHO to create international standards and codes of practice, though implementation was not enforceable at a supranational level. The DoH was the responsible department to enact the Codex principles in RSA. The Council (2019) recognised that whilst national government departments enacted legislation, in matters of food safety, the responsibility of implementation laid with local government. Korsten (2018) echoed the view that legislative food safety responsibility fell to all three tiers of government, namely local, provincial and national and that governance was between these main departments, the respective provincial departments and the local government who carried out some of the functions per legislation and regulations. In a recent study, specifically focused on RSA FSG in the aftermath of the 2017/18 outbreak, Boatema et al. (2019) reviewed 74 documents including public documents, corporate reports and media articles. Their research concluded DAFF, DoH and DTI were the responsible national governmental departments for food safety governance, with delegation of duties to municipalities in terms of environmental health by-laws.

At national level was that government was divided into Cabinet Clusters that intended cooperation and coordination between Ministries who were deemed to be cross-cutting in function and best-placed to deliver outcomes working together through leveraged resources (GCIS, 2021). The Clusters were vertically established through the Forum of South African Directors-General (FOSAD) who were responsible for the administrative implementation of the executive decisions that stemmed from the Cabinet Clusters. It should be noted that whilst still in the longer-term post-outbreak actions, the names and responsibilities of some Clusters, Ministries and Departments changed. There were two Clusters and therefore two FOSAD structures that covered food safety could be brought into the fold either from an economic or health perspective. The first was Economic Sectors, Investment, Employment and Infrastructure Development of which the Department of Agriculture, Land Reform and Rural Development (formerly DAFF), Department of Environment, Fisheries and Forestry (also formerly DAFF and DEA), Department of Human Settlements, Water and Sanitation (formerly DWA) and Department of Trade and Industry formed part of. The Department of Health was situated in Social Protection, Community and Human Development. During the period of the outbreak, to also understand the government,

as it is said “money talks” and according to a StatsSA (2020b) infographic, more public funds were being spent on servicing government debt than allocated to issues of health.

Department of Health (DoH)

The Guidelines for Environmental Health Practitioners on Food Safety Control at Special Events (DoH, 2004) noted that within DoH, the specific actor responsible implementation of the department’s mandate was the Directorate of Food Control who led the provincial and local government tier coordination and delegation of responsibilities with approval from their Director-General who was in turn delegated the responsibility by the Minister of Health. The DoH issued these guidelines after an incident of food poisoning cases at an international event the RSA government was hosting resulted in embarrassment as the foodborne illness made news headlines abroad. The response were these guidelines which emphasized the self-steering approach and FSG coordination amongst the private sector service providers. The guidelines reinforced the Health Amendment Act 2003 (No. 63 of 2012). Whilst the actors were broadly identified, the closest the guidelines spoke to issues of governance was referring to food control, which this study understood as vertical government policy and decision making and deregulated self-steered private sector actor implementation.

One of the principal FSG Acts administered by the Department of Health at the time was the Foodstuffs, Cosmetics and Disinfectants Amendment Act (No.39 of 2007). The Act did not specifically identify stakeholders beyond the government actors who were recognized as the Minister, Director-General, analysts, environmental health practitioners and inspectors. The Act stated the legislative authority is vested in the Minister who could delegate to the Director-General. Delegation could further occur to the provincial administration or local authority in terms of the Local Government: Municipal Systems Act 2000 (No. 32 of 2000) – subsequently amended in 2011 - through a notice in the government gazette. The Act briefly mentioned the possibility of Cabinet cooperation between the primary Minister of this Act, the Minister of Health and the Minister of Agriculture, Fisheries and Forestry (DAFF) , Minister of

Environment Affairs (DEA) as well as the Minister of Water Affairs (DWA). Non-state actors throughout the Act were referred to as 'any person'.

Department of Agriculture, Fisheries and Forestry (DAFF)

DAFF (2019) explained that their Directorate: Food Safety and Quality Assurance implemented the aspects related to food safety in terms of two DAFF legislative Acts, namely the Agricultural Product Standards Act (No. 119 of 1990) and the Liquor Products Act (No. 60 of 1989). DAFF noted that key responsibilities of this Directorate included setting standards and disseminating information to other actors on food safety criteria including quality, packaging, labelling, chemical composition and monitoring of microbiological contaminants as they relate to agricultural and associated products. It was further stated that the Directorate was also responsible for enforcement of the Acts and complementary regulations. Enforcement was undertaken by departmental assignees, who inspected premises at points of sale, manufacture, packing or distribution. The Interpretative Guideline Regarding Inspection of Regulated Agricultural Products by Designated Assignees in the Republic of South Africa (2017) stipulated that in terms of food safety, the term seller included but was not limited to agents, retailers, wholesalers, owners, representatives of owners, silos, bakeries, pack houses, abattoirs, ports of entry, manufacturers, warehouses and distributing plants. The onus was on them to ensure compliance with the standards at point of inspection. The Question and Answers on Assignees Designated in terms of the Agricultural Product Standards Act (No. 119 of 1990), specified that the Minister of Agriculture, Forestry and Fisheries appointed the assignees in June 2016 and January 2017. Assignees included the Perishable Products Export Control Board, Product Control for Agriculture, the South African Meat Industry Company, Agency for Food Safety, Impumelelo Agribusiness Solutions, Leaf Services, Nejahmogul Technologies and Agric Services, Prokon and SAMIC. The further detailed that the cost of inspections by these assignees were to be borne by the seller. The Act and its explanatory documents thus provided greater elucidation on the nongovernmental actors in food safety in South Africa.

Department of Trade and Industry (DTI)

The DTI was responsible for the Standards Act (No. 8 of 2008) that established the post-Apartheid South African Bureau of Standards (SABS), setting out its mandate and high-level scope of standards application. SABS was a founding member of the International Standards Organization (IPSO), and its work covered the scope of all sectors. It does not speak to food safety governance specifically, but it was considered by the Food Advisory Consumer Council (2019) as a key Act within the governance of broad food safety. The Act specified that SABS developed, maintained and promoted standards on a national level to enhance South Africa's economy, transformation and international competitiveness. These aspects were incorporated into food safety governance through the recognition of food safety importance thus one of the SABS mandates was to research and develop standardized testing methodology being a founding member of the International Standards Organization (IPSO). The Act legislated that SABS is managed by a Board, appointed by the Minister of Trade and Industry. The members of the Board can come from any sector with the relevant prerequisite knowledge as one of the appointment criteria. The Board governance is thus both vertical and horizontal. In line with this broader horizontal governance approach, the Act determined that national standards were to be developed in a consultative and consensus-building manner. The Act however conceded ultimate responsibility to the relevant cabinet Minister.

The National Regulator for Compulsory Specifications (NRCS) and SABS are two separate agencies. The Parliamentary Monitoring Group (2011) recorded minutes of the Annual Report 2010/11 presentation to the Parliamentary Committee of Trade and Industry made jointly by the NRCS and SABS. SABS noted that despite its 66-year existence, there remained confusion in application of functions. SABS clarified that its predominantly funded and worked based on government priority instructions, but it was not a government body and could take-on private work if capacity allowed. Its work mandate for government was the development of national standards, testing the efficacy of the regulations and providing the (re)training to implement the new or amended standards across appropriate sectors and niches. The NRCS established in 2008 was the next stage gate as it were. It implemented, monitored and enforced compliance given it was a government mandated agency with legal authority and

legitimacy. SABS on the other hand, whilst primarily funded by government had its independence and worked on what from 2002 were known as South African National Standards (SANS) to differentiate the public versus private and have underlined that the South African National Standards whilst produced by SABS were wholly the product of the RSA Government which at handover became the technical implementation work of the state agency the NRCS. The NRCS stated that its functions focused more on imported, locally manufactured, sales stand compliance and limited work with exported products. It noted that in their then current reporting cycle, they had finalized the names of individuals from different sectors to serve on their Advisory Board – horizontal feed in with consultative checklist complied to but vertical development of policies and decisions made.

The Consumer Protection Act 2008 (No 68 of 2008) established the National Consumer Council (NCC). The government institutions' mandate amongst other functions were to create norms and standards that protected consumers: here being individual actors. This was intended to protect individual consumers from purchasing foods that placed their health at risk, educating on consumer choice and assisting in redress. Additionally, they had a role to enforce compliance with its norms and standards developed to ensure private sector compliance.

Provincial Government

The Municipal Systems Amendment Act (No. 7 of 2011) aligned the three tiers of government with the Minister of Cooperative Governance and Traditional Affairs (COGTA) centrally steering and coordinating the nine Provincial Members of the Executive Council (MECs) responsible for the portfolio at provincial level. These MECs coordinated with the Mayor and Councillor(s) responsible for the portfolio. In terms of FSG, the provincial government was mandated a support and oversight role (DoH, 2018b, GCIS, 2018). The Act further brought together all three tiers of government as provincial Premiers engaged with National Treasury for a budget allocation aligned to achieving their provincial strategic plan. At provincial level FSG only came into play within the broader provincial mandate of developing protocols, coordinating and enacting health services, which wasn't food safety governance specific in any of the legislation, but more of a health response to a food safety challenge as it arose though

De Villiers (2019) argued differently as he interpreted the constitution to have envisioned a multi-tier approach on the delivery of services.

Local Government

At the local level, the nine provinces of South Africa are further divided into 278 different sized municipalities with the eight largest being metros. The aim of local government being to progressively achieve social and economic upliftment as well as ensure people's universal access to essential services in an affordable manner (Municipal Systems Amendment Act No. 7 of 2011). Encouraged by the legislation, municipalities were empowered, and they drafted and implemented by-laws, some of which specifically related to food, health and environmental safety. Participatory governance was encouraged. The mechanisms were designed to be steered through vertical governance. The City of Tshwane (2019) for example referenced the Health Act 2003 (No. 63 of 2012) to explain that its municipal competencies included food safety, health surveillance of premises and control of communicable diseases. These competencies promoted the health and well-being of municipal communities and were rendered by the Municipal Health Service, practically through Environmental Health Practitioners (EHPs) whose responsibilities included educational awareness, initial planning approvals, sample testing, premise certification and inspections as well as complaints management.

At local level, they (DoH, 2004) saw their role different to De Villiers (2019) argument. Food Safety was not a governance issue but practical through the EHPs who implemented national decisions and had to be supported by provincial government where they lacked resources to fulfil their practical mandate. This was mainly the monitoring and inspection of food and food producing facilities, issuing or withdrawal of compliance certification and participating in investigating sources of foodborne illness and taking remedial actions. Supporting this view, TBF (2018c) acknowledged that they worked specifically with EHPs as only local government had the legislative mandate to issue Certificates of Acceptability.

4.2.2 Private Sector Actors

Greenberg (2016) used a value-chain approach to illustrate the dominant extent of the private corporate sector in the food system in RSA. Whilst the governance within this sector had gradually moved to horizontal, it dominated with government as a vertical power actor that used its concentration of power across this industry to self-regulate and set its own terms of operation. To this end, Struweg (2018) had commented that the fact that the source of the outbreak, TBF, could avoid cooperating with the full quota of governance actors clearly showed the dominance of the private sector. The other main private actor at the time was Rainbow Chickens owned by RCL Foods who was also identified as one of the sources of the tainted ready-to-eat meat products (DoH, 2018a). Reuters (2018) noted that South Africans were blaming the processed meat industry which included amongst others Tiger Brands, RCL Foods, Eskort Bacon Co-Operative, Rhodes Foods and Astral Foods being the leading market shareholders. The report went on to note that other actors in the food system were impacted by the outbreak such as grocery shops including large retail such as Woolworths and Pick and Pay.

Another key private organization involved at the time were legal actors who sought accountability and compensation. In this case Richard Spoor of Richard Spoor Inc was the lawyer that made his presence known to Tiger Brands (2018a). He served Tiger Brands with an application for an order that detailed the four categories of classes of claimants who sought compensation. Later that year Richard Spoor Inc. (2019) announced that it was working equally with LHL Inc. They had been granted on 3 December 2018 an order to pursue a class action suit against Tiger Brands Inc. by the Gauteng Local Division of the High Court of South Africa.

4.2.3 Nongovernmental Actors

Anderson (2011) supported nongovernmental actors' participation in lateral policymaking, though he was clear that other stakeholders don't have the legal mandate to decide or compel consequence for lack of compliance. Levisky and Way (2006) suggested that the success of nongovernmental actors was linked to how they linked to each other and leveraged resources including power. Effectively used, it

could create more accountability with governance systems (Tolstrup, 2010). Barasa et al. (2016) added that balanced participation between actors allowed for mutually beneficial opportunities to fulfil the various stakeholders aims especially where agendas met. At the time of the outbreak there were several nongovernmental FSG actors who directly or indirectly fed into FSG even where not officially or specifically recognized as legislated FSG actors; noted here are the research, regulatory and advisory institutions.

The Agricultural Research Council (ARC, 2014) stated mission was to be a centre of excellence in conducting research on its own and with other actors to support the development of the agricultural sector. Their main functions included research, innovation, transfer and accessibility of technology all to promote agricultural growth and progress. They undertook this self-appointed mandate in collaboration with government departments, private sector actors, interested and affected individuals and other nongovernmental organizations both within and outside of South Africa. Likewise, the Department of Science and Innovation – National Research Fund Centre of Excellence in Food Security also delved into researching and writing about FSG (DSI-NRF CoE, 2021). This research was enriched by individual and collaborative academia including the likes of Boatemaa et al. (2019) and Hunter-Adams (2019).

There were a number of nongovernmental regulatory bodies. The Agricultural Produce Agents Council (APAC, 2016) stated that it's a regulatory body that seeks to conform the standards expressed by agents of fresh produce, export and livestock. Their purpose being to protect the agricultural industry and better contribute to its development and transformation. Similarly, the South African Bureau of Standards (SABS, 2020) was founded in 1945 as a national body to promote and maintain a consistent standard and quality of products and services available in RSA. SABS maintains and updates a considerable number of regulatory standards that apply to the Food & Beverage industry in RSA which incorporate standards for manufacturing, quality and testing. Also, within the ambit of the Food and Beverage industry, the Food Safety Agency (FSA, 2020) focused on the provision of trustworthy auditing services to the retail and food service sector working with a multitude of suppliers, restaurants, and key food retailers nationally and globally.

There were also advisory and guiding organizations. The Consumer Goods Council of South Africa (CGCSA, 2016) is a membership-based organization whose members emanate from the private sector in the extended RSA food system. It also works with other stakeholders to advise its members on local and global standards for product labelling, product barcoding, data management as well as sustainable, quality and safe food. The organization represents its membership through interaction with other actors such as the media, government departments, other similar agencies and individual consumers through consumer awareness, engagement. The Food Advisory Consumer Services (FACS, 2021) was established in 1995 to also provide the individual consumer and the media with locally and globally sourced data from scientific institutions specializing in issues of food and nutrition. It is a voluntary organization that is funded by the South African Association for Food Science and Technology (SAAFoST) which is a non-profit, scientific organization for food and other science professionals in RSA. The volunteer management committee includes representatives from SAAFoST, the South African National Consumer Union (SANCU), the Association for Dietetics in South Africa (ADSA), the Nutrition Society of South Africa (NSSA) and the DoH. Day (2013) reported that the Food Safety Network (FSN) was a local online search portal providing easy access to a directory of reliable and current food safety information. He stated the network became necessary due to the lack of consistent, comprehensive and consolidated research that then compromised all governance actors in the food system. The Restaurant Association of South Africa (RASA, 2019) also created a Food Safety Initiative to work together with government.

4.2.4 International Actors

International Financial Institutions

In the context of prioritizing food safety governance, the World Bank (2020) added an approximation that the current 2021 worldwide recession was set to be one of the worst ever which would impact on RSA ability to achieve all or any degree of its commitments in every single sector, which included issues such as food safety governance. Underlining the precarious economic situation in RSA, BusinessTech (2020) informed that Moody's and Fitch rating agencies had downgraded South Africa

further. Moody rated Ba2 which took the country two levels down of junk status whilst Fitch was harsher in its scoring of BB- taking the country down three levels of investment. Economically democratic South Africa, even when it inherited substantial multi-billion USA dollar \$ debt from the Apartheid government at handover (The Economist, 1999) had never been in such a politically economic hazardous state of balancing the fragile socioeconomic upliftment tightrope whilst invested in the growth of a market economy whilst providing a steady social net for the most vulnerable and marginalized. Inevitably international financial organizations would be involved in FSG given that the RSA agri-food system including its employment had global trade and economic repercussions (Ledger, 2016 and Stats SA, 2000b) as well as the linkages between development and international transformation thereof (Patterson et al., 2017) and Western focus on good governance to exclusion of African concepts thereof (Wachira, 2020).

The Food and Agricultural Organisation of the United Nations (FAO)

The FAO (2006) used the definition of food security as agreed to at the World Food Summit, namely 'Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life' – the emphasis here on safe. The Committee on World Food Security (CFS, 2013) endorsed this definition with RSA members of each organization. The FAO (2019) in a recent report entitled 'The #FutureofFood depends on the future of food safety' explored how food safety and its technology was linked to the achievement of the Sustainable Development Goals (SDGs) Two and Three. The FAO was unambiguous in its statement that 'for food to be food, it needs to be safe'. This advocacy for the importance of food safety was based on their calculations that over six hundred million people were affected by consuming contaminated food resulting in approximately 420 000 deaths per annum with the WHO (2015) concurring. Whilst not specifying in detail; the FAO (2019) recommended that for food safety to improve and be better, actors must be inclusive and cross-cutting to reinforce each other and use their strengths within the food system for mutual benefit. They recognized the role of government and nongovernmental actors at all levels, placing importance on communities as actors.

The World Health Organisation (WHO)

The WHO and FAO co-developed the Codex Alimentarius, a "food code" to which RSA is subscribed to with the DoH being the government coordinator (FAO, 2021). These standards, guidelines and codes of practice were used successfully by numerous countries to achieve food safety. The code was also intended to advise on FSG to its signatories such as RSA. In specific reference to the outbreak, the World Health Organization The WHO (2018) recorded 978 laboratory confirmed cases between 1 January 2017 and 14 March 2018, notably the same as the RSA Department of Health lead institution, the National Institute of Communicable Diseases (DoH, 2018a), both RSA government organizations having stressed the direct role the WHO had played in the outbreak investigation and resolution. Initially by agreement with the Department of Health (DoH, 2018a), the WHO acquiesced to serve as observers to verify the government's steps undertaken to end the outbreak. Later they concurred that the role would be expanded to provide proactive technical advice to the initial investigating team and proceeded to become participatory technical international expert actors who drew up the Emergency Response Plan together with the DoH and NICD that resulted in the Incident Management Team, which was a primary official document that informed the actor map at the time of the listeriosis outbreak from 1 January 2017 to 14 March 2018 (DoH, 2018a).

International Food Safety and Quality Network (IFSQN)

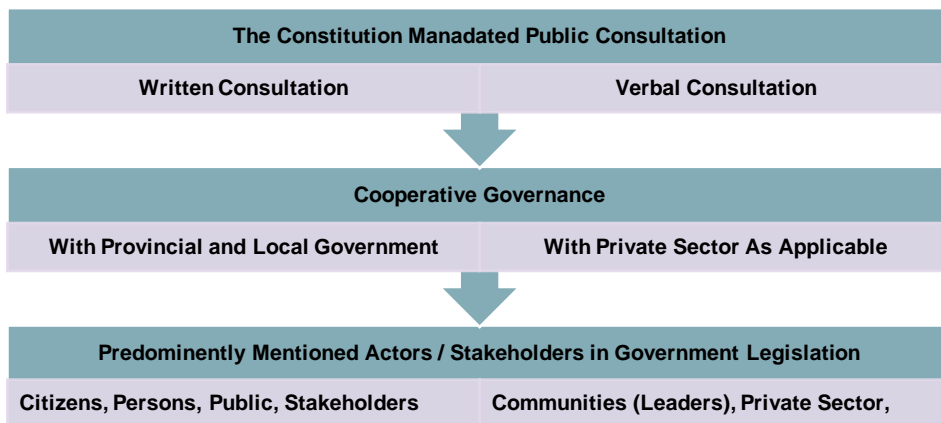
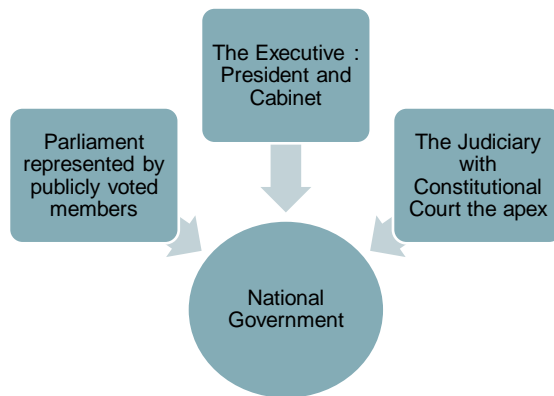
IFSQN (2020) relayed that it's an international networking group for food safety professionals and governing bodies. They connect the global food system governance network with the primary aims of sharing knowledge and best-practice experience; a resource that was available to leverage during the outbreak.

4.3 A Map of the Main Food Safety Governance Actors at the Time of the 2017/18 Listeriosis Outbreak

The map was drafted based on official South African government documentation, principally from primary sources including multiple pieces of legislation, regulations, Cabinet Ministerial speeches and media releases across government tiers – national,

provincial and local – and departments. All grounded in the constitution mainly Chapters (3), (6), (7) and (10) and the Bill of Rights Chapter 27 (b) and (c) which at the minimum provided the state with a clear high-level blueprint (Constitution of the Republic of South Africa, 1996). In addition, insight from the WHO statements (2018) provided key direction as did the work of local academics such as Boatemaa (2019), Hunter-Adams (2018) and Korsten (2018). The perspective of the private sector was captured notably from TBF own communication (2018). The map reflects both government, nongovernmental and international organisations’ primary and secondary data.

THE REPUBLIC OF SOUTH AFRICA (RSA) 2017/18



NATIONAL GOVERNMENT

The President, Deputy President, Ministers were final decision makers. President signed all documents to give them effect. Deputy Ministers aren't part of Cabinet but provide interface between department and Minister notably on matters of service delivery or those prioritised by the President / Cabinet.

The main departments politically fell within two Cabinet Clusters, namely:

Economic Sectors, Investment, Employment and Infrastructure Development
Social Protection, Community and Human Development

Documents which required Cabinet approval to implement or for the process to proceed must first be approved by the Forum of South African Directors-General (FOSAD). All of these documents had specific formats and order of signatories.

Depending on the type and clearance of official documents, some are approved by departmental senior managers formally delegated by the Director-General (DG), the departmental head.

The Minister delegated certain functions to the DG and both in turn through the printed Government Gazette delegated further to provincial and local counterparts.

Departments depending on size are arranged under the DG thematically with a Deputy DG, one or more Chief Directorates with one or more Directorates under it - this was the government format at the time.

PROVINCIAL GOVERNMENT

There are nine provinces within RSA each with the same or similar structure depending on population not land size: Eastern Cape, Free State, Gauteng, Kwa-Zulu Natal, Limpopo, Mpumalanga, North West, Northern Cape and Western Cape. The WHO (2018) reported confirmed listeriosis cases from all nine hence an epidemic.

Each Province was led by a Premier who had to fulfil functional duties mandated by the constitution, delegated functions from the Cabinet and management of Province through Provincial Executive Committee.

Portfolio and Department Configurations differed from National Government.

The Political Head was called the Member of the Executive Committee (MEC) for a portfolio.

The Administrative Head was the Head of Department (HoD) who at times reported to several MECs

Provinces had leeway however as per de Villiers (2019) not one has taken National Government to court over cascading legislation, policy or delegations.

LOCAL GOVERNMENT

There was 278 municipalities with 8 metropolitan (major cities), 44 district and local whose function was through the constitutional mandate, delegation of functions, duties allocated in national legislation and own by-laws focused on local economic development and coal-face service delivery / implementation.

The Political Head is the Mayor assisted in portfolios by Executive Council Members and Councillors. The Administrative Head the Municipal Manager. Configuration, portfolio and staff was dependent on size.

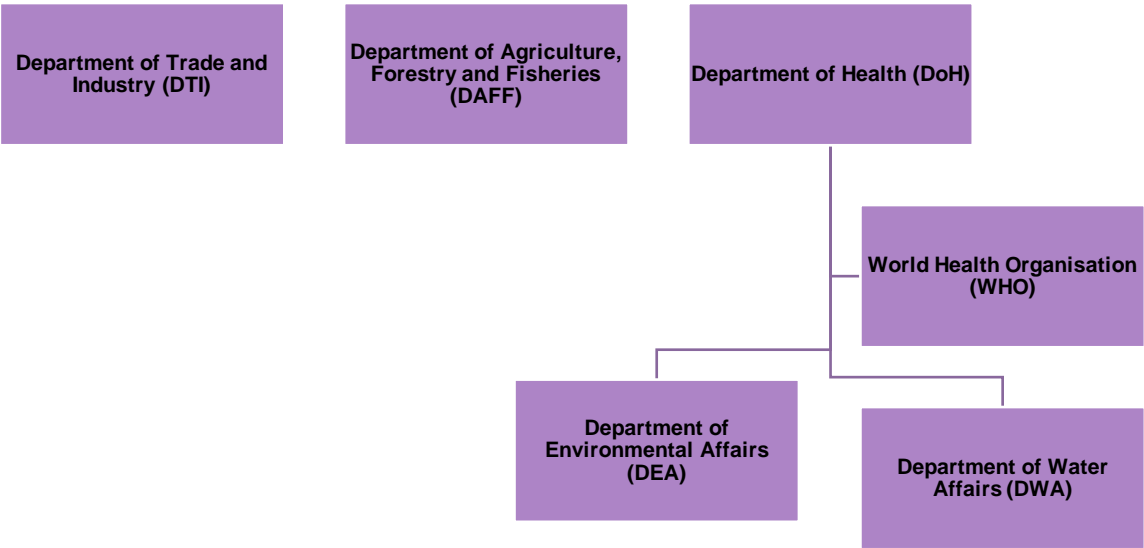
Local government received funds from provinces for their budgeted priorities but they raise own funds from rates and service fees on electricity, water, sewage and rubbish removal as well as other ad hoc services.

Government cited consultation with the South African Local Government Association (SALGA) which is voluntary but a Schedule 3A as municipality members pay fees and they receive a small amount from National Government.

In terms of food safety governance, local government saw it as part of their Environmental Health Practitioners division and not a separate function.

SPECIFIC FOOD SAFETY GOVERNANCE ACTORS WITHIN THIS FRAMEWORK DURING 2017/18

THE THREE MAIN DEPARTMENTS, TWO SUPPORTING DEPARTMENTS AND INTERNATIONAL ACTIVE ACTOR PARTNER



Food Safety Governance Actors From National to Provincial to Local

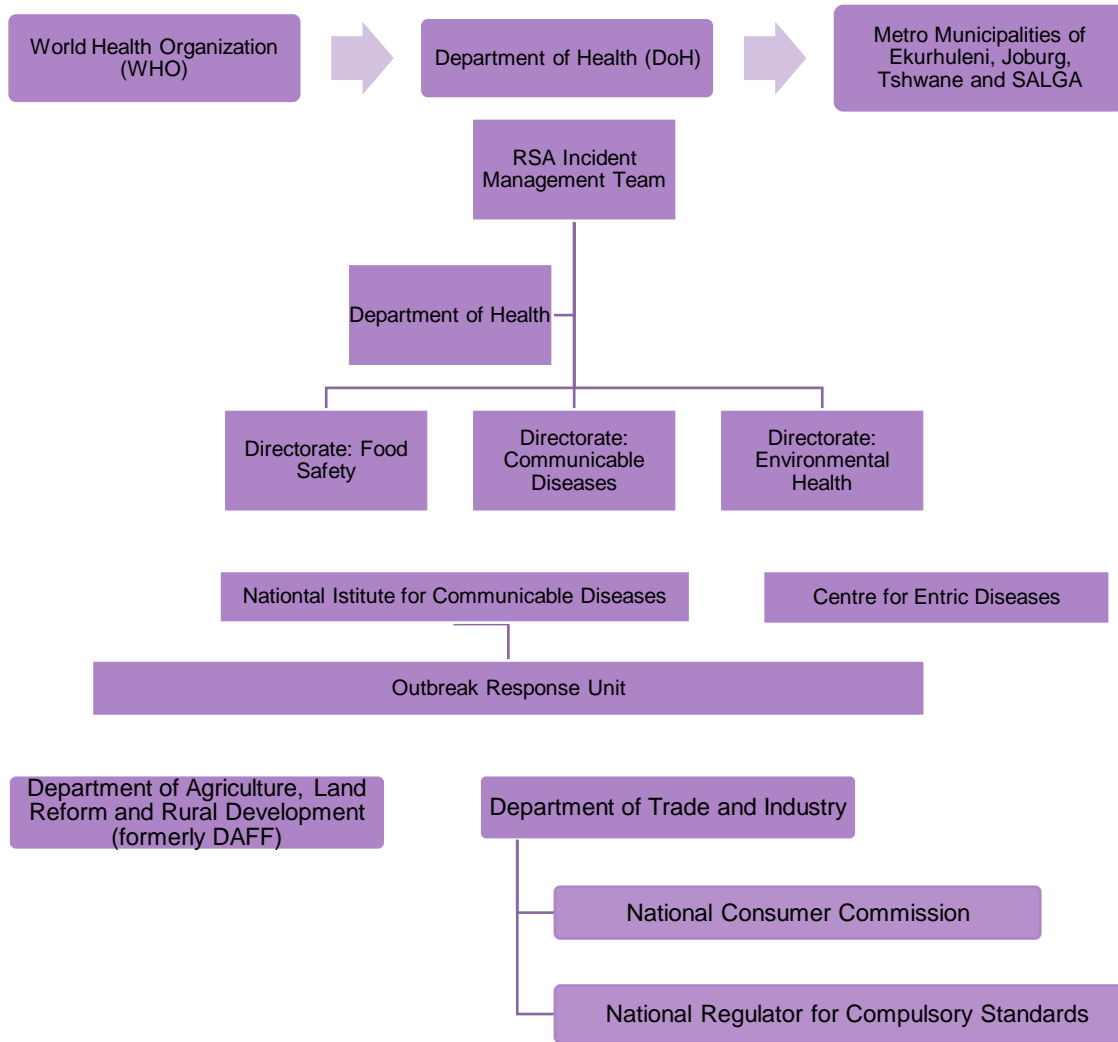
From Provincial and Local Feedback Into National Processes Including Their Active Stakeholders.

PROVINCES were intended to provide support i.t.o resources: targeted human capacity building, additional manpower for duration required, funds for unbudgeted municipal expenditure for operational costs of Environmental Health Practitioners (EHPs) however this did not fully materialize as provinces argued that their legislated mandate was health services so they could only assist with informing provincial hospitals and clinics and ordinarily, the communities and their leaders through targeted communication but they had no budget.

The metros of Ekurhuleni, Joburg and Tshwane together with SALGA worked with the private sector in cooperation with the respective government departments and institutions as only municipalities had the inherent legal mandate to have EHPs inspect, record and issue notices ranging from recall and closure which occurred with the Tiger Brands and RCL Foods suspected source facilities. They could withdraw or re-issue certificates of acceptability which allowed commercial activity to resume in both cases. They needed the policy & technology of National Government.

From National Government coordinated processes, delegations, instructions to implement and sharing of information.

THE DETAILED TEAM DURING AND IN IMMEDIATE OUTBREAK AFTERMATH



ACTORS AT THE TIME OF 2017/18 OUTBREAK

Active Engagement and Two-Way Partnership with Government and / or Co-operative Government and / or the Private Sector

- WHO
- TBF, RCL Foods and other major top ten RSA ready-to-eat meat processing companies with some having a regional, continental and international footprint – fully active
- Specific Provinces, Metro Municipalities of Ekurhuleni, Joburg and Tshwane
- ARC, APAC, SABS, FSA, CGCSA
- SALGA

Non-Active Engagement –Governance with Government and Private Sector Where Included or Information Required or Relayed

- FACS, SAAFoST, SANCU, ADSA, NSSA
- FAO
- IFSQN
- Richard Spoor Attorneys Inc.
- Small Businesses
- Local Communities
- Local Community Organizations
- General Public
- Individuals / Interested Persons / Citizens

Figure 4.3 A Map of the Main Food Safety Governance Actors at the Time of the World's Largest Ever Listeriosis Outbreak in 2017/18 South Africa

4.4 A Timeline of the Actors Response During and in Aftermath of the Outbreak

The WHO (2018) confirmed that South Africa experienced an epidemic of listeriosis with the first case reported in January 2017 and outbreak declared over in March 2018. Between these dates and in the aftermath various actors undertook steps to contain the spread of listeriosis by finding the source, issuing a product recall and creating community awareness to prevent additional cases. In December 2016, listeriosis became a communicable disease that had to be reported to the NICD, who during that month was working on an early alert database system but with the first case confirmed from 1 January 2017 and an increasing number during the month, the focus had to be redirected to listeriosis. 11 months after the first cases being reported to the NICD occurred, a pattern emerged. This resulted in the Minister of Health at the time, Dr Aaron Motsoaledi, undertaking two main response actions on 5 December 2017. He informed the public that South Africa was in the midst of a listeriosis outbreak and he appointed a Joint Public Health Emergency Team of government departments and institutions as well as local government representation to investigate the source of the outbreak. The WHO observed and advised by request and within an agreed scope (DoH, 2018a). A year on from the first reported cases, on 3 January 2018, the NICD (2018c) released a situational report that stated they were working with local government Environmental Health Practitioners (EHPs) to inspect sites and gather samples for the NICD to test using WGS. They acknowledged at that stage; no source had been identified.

The Minister of Health (2018c) recorded the following in a speech in September 2018, providing the government perspective of action and outcomes. Three months later to the day on 3 March 2018 the Joint Public Health Emergency Team informed him that they had confirmed the source of the outbreak was an Enterprise ready-to-eat meat processing plant in Polokwane, which manufactured the contaminated processed meat, commonly known as polony. Enterprise was a subsidiary of Tiger Brands Food. They further informed a trace amount of ST6 was found at a facility of Rainbow Chickens owned by RCL Foods. A day later on 4 March 2018, these companies were issued notices to recall all products manufactured there with immediate effect and shut production until inspection clearance. 24 hours later on 5 March 2018 the WHO moved from an observational capacity to a fully-fledged technical actor as together with the

DoH and NICD they drafted an Emergency Response Plan approved at executive level; used to contain the outbreak and put in measures that reduces future risk through early proactive action with key steps and actors in place. The Emergency Response Plan created an Incident Management Team who had representatives from the following actors: the national government departments of Agriculture, Fisheries and Forestry (DAFF); Environmental Affairs (DEA), Health (DoH) and Trade and Industry (DTI). National Institutes represented were the National Consumer Council (NCC), National Health Laboratory Service (NHLS), National Regulator for Compulsory Specifications (NRCS) and the South African Military Health Services (SAMHS). Local government was represented by officials from the South African Local Government Association (SALGA) and the specific District Municipalities of Tshwane, Joburg and Ekurhuleni (DoH, 2018a).

The NICD reported that on 14 March 2018 the facilities identified as outbreak sources remained closed until all health standards were resolved. In addition to the product recall issued locally, a recall with immediate effect for all Enterprise polony and similar products from South Africa exported to 14 South African Development Community (SADC) countries were recalled (NICD, 2018a). The Minister of Health met with his SADC counterparts on 15 March 2018 to ensure a coordinated approach to recall and contain regionally with the WHO (2018) offering their services to any SADC country who needed advisory or technical assistance in this regard. In effect, the government of South Africa with the agreement of the World Health Organization declared the outbreak over on 14 March 2018, noting that there would be additional work to be carried out to wrap-up the outbreak and put in measures to prevent reoccurrence on such a scale.

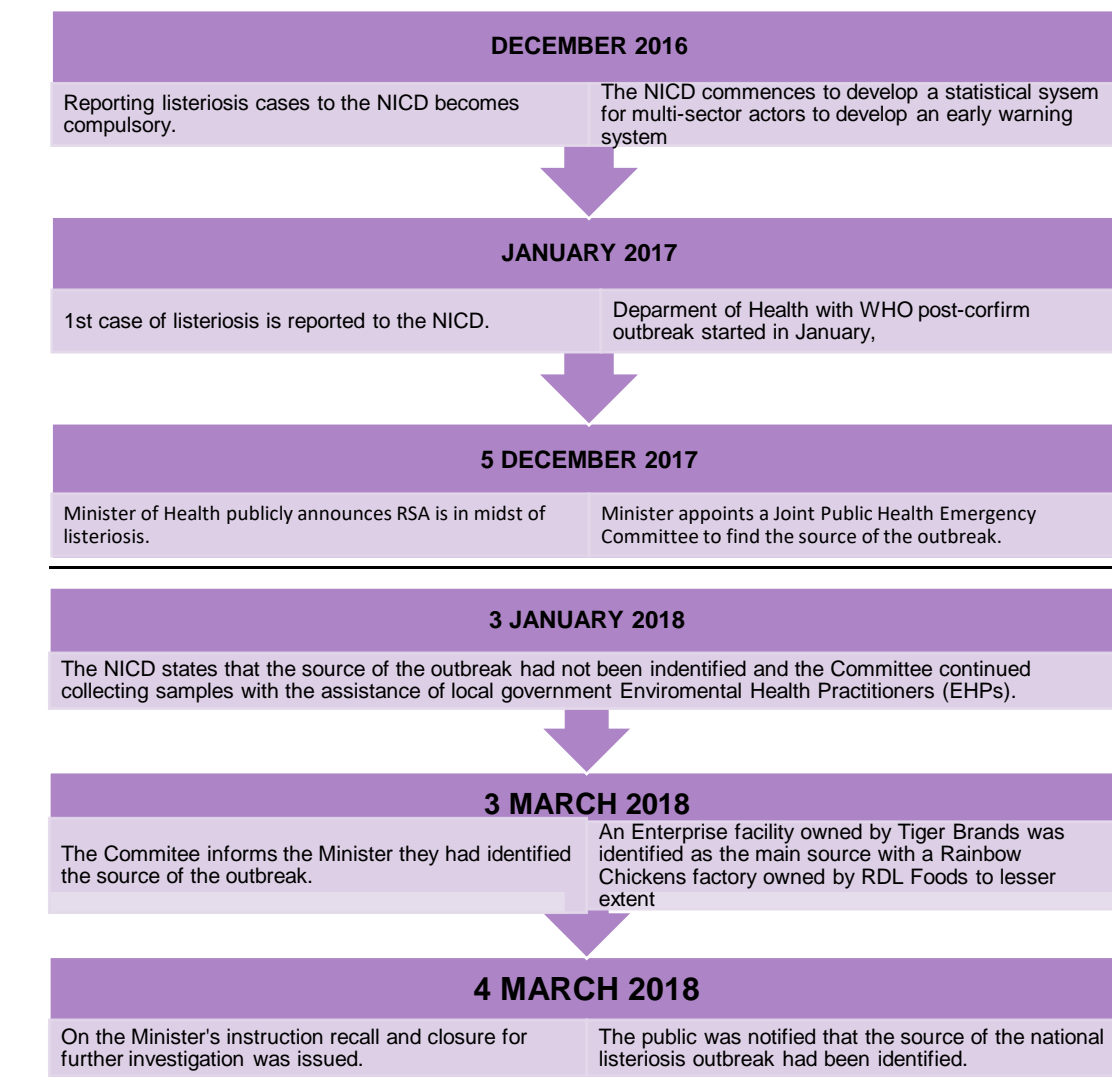
Tiger Brands (2018a) officially responded on 26 March 2018. They confirmed the recall and closure effective 4 March 2018 as the Minister of Health had stated. They further noted they had their facilities and products emanating therefrom independently tested. The tests were in line with the Joint Public Health Emergency Team's findings of the presence of ST-6 in the facility but noted that neither government's expert team nor their independently appointed investigators found it in the products itself. Their Chief Executive Officer was clear that though there was evidence in the facility of a slightly higher than normal count of *Listeria monocytogenes*, this was an industry norm hence

government set standards for presence thereof. Moreover, there was no proof tying them to a product that caused listeriosis. Tiger Brands (2018b) later acknowledged with regret that their independent investigators detected higher levels than the standard of *Listeria monocytogenes* in their polony samples and undertook to work with national and local government to rectify speedily.

Post outbreak the DoH (2018a) said that it was a natural occurrence to find the bacterium *Listeria monocytogenes* in food though it rarely developed into the disease listeriosis and if so, then mild cases ensued. It thus occurred annually but not to an outbreak level where a national response was required, with usually 60 to 80 cases per annum. To this end, for the Minister and Department of Health, no specific measures were required as it was so rare and hardly ever impacted on humans beyond a few days of gastro symptoms. The Minister (DoH, 2018a) addressed that the focus had been on dealing with a detailed “clean up” of the outbreak such as the Department of Environmental Affairs had destroyed per regulations 5812 tons of the recalled products with the remainder to be completed by end September 2018. The Minister continued that the remedial actions served to strengthen overall food safety and announced that in the six months since the outbreak had been declared over on 14 March 2018, 900 EHPs had been re-trained across the country, all 157 nationwide ready-to-eat meat production plants had been inspected as well as together with WHO an early warning system was being developed and customized to be managed by the NICD once completed.

Regulation R607 (DoH, 2018a) had been gazetted that compelled all ready-to-eat meat processing plants to have standardized food safety management systems, in other words standard governance processes for the industry at the bottom-up level. BusinessTech (2019) reported that after the 2019 national government elections, there was a Cabinet reshuffle with some departments rearranged and renamed. Dr Zweli Mkhize became the new Minister of Health, and the Department of Agriculture, Fisheries and Forestry became the Department of Agriculture, Land Reform and Rural Development (DALRRD). Food Safety News (2019) reported that in August 2019 interdepartmental regulations had been gazetted between the DoH and DTI, which now saw the National Regulator for Compulsory Specifications (NRCS), an organization under the auspices of DTI, as the responsible government actor for the

development of regulations, compliance inspections and enforcement. The new Minister of Health, Dr Zweli Mkhize was recorded as stating that the new regulations and management thereof issued in a new era of FSG where multi-stakeholder collaboration between government and nongovernment actors would minimize the effects of foodborne diseases beyond the disease itself. Tiger Brands sold its meat processing business component for R253 million given its share price had plunged by 40% in 2018 after the outbreak (Business Tech Africa, 2020). Figure 4.4 provides a visual timeline of the response captured here.



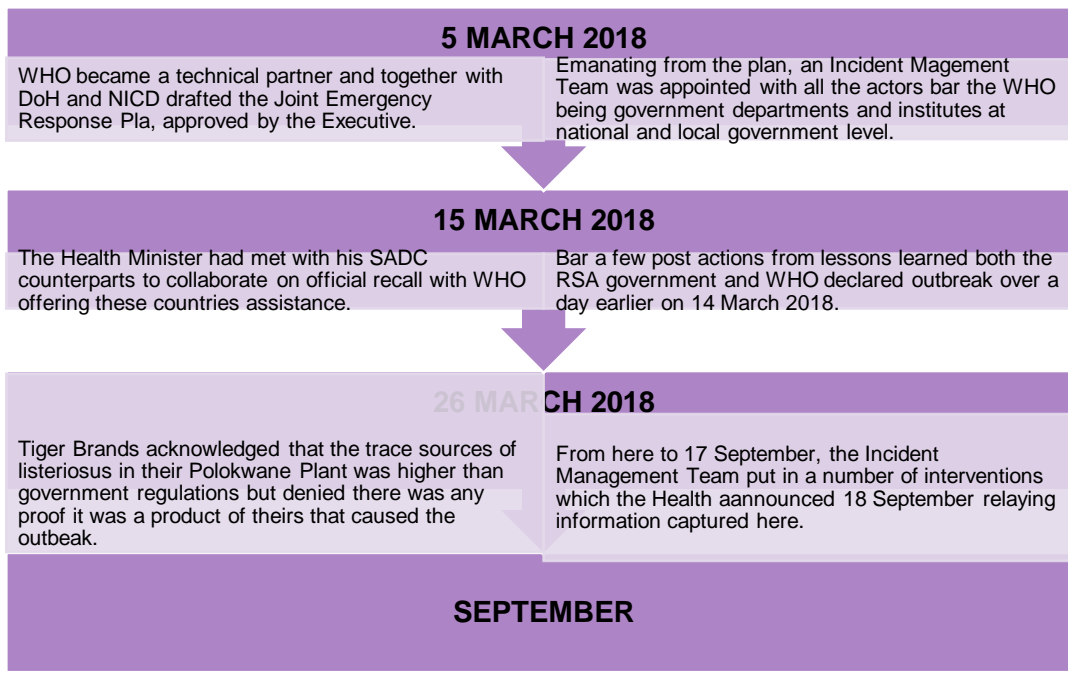


Figure 4.4 The 2017/18 Timeline of the Listeriosis Outbreak and FSG Actors Response

4.5 Discussion

4.5.1 The Problem Statement

In 2017/18 the world's largest ever listeriosis outbreak occurred in RSA. According to Korsten (2018) for a number of reasons, the RSA government was ill-prepared for a foodborne outbreak of this magnitude, though scientists in the field had been anticipating it and warning with little effect. Some of the supporting reasons included that FSG needed to go beyond government (Pereira and Drimie, 2016), it had become too deregulated (Ledger, 2016), lacked a central-steering authority that could properly coordinate all the actors (Boatema et al., 2019), the private sector held too high a concentration of power (Pereira, 2013) and the costs to contain such outbreaks were far higher than preventative measures (Olanya et al., 2019) which was problematic given that RSA continues to face the triple challenges of inequality, poverty and unemployment.

For Smit (2016) it was baffling that there was too little research in the area of FSG actors. Boatema et al. (2019) agreed that the absence of a FSG actor map was one of the challenges to resolving gaps in FSG in RSA. The lack of detailed roles and

responsibilities of these actors went beyond a research gap to practically affecting the most marginalized by poor FSG (Battersby and Haysom, 2018). Ultimately, Donnelly (2018) advocated for a FSG actor map as the absence of which entrenched disjointed legislation, regulation and application.

4.5.2 The State of Food Safety Governance in South Africa

Measuring food security (Maluleke, 2019) in terms of constitutional prescripts (Constitution of the Republic of South Africa, 1996) in line with the UDHR (1948) remained complex to assess. This included food safety governance within broader food security in food systems (Pereira, 2013 and Ledger 2016). Du Toit (2011) saw the safety and nutrition part of this equation as even more difficult to calculate using governance as a yardstick. The access to food though a basic human right (Rowe and Moodley, 2013) was still an unmet constitutional right which was why de Villiers (2019) advocated for improved horizontal governance to succeed. For the above reasons, FSG was important principally within the context of socioeconomic materiality of RSA which Dryzek (1990) had earlier advocated could be resolved through policy processes that Madelin (2008) had noted was an innate part of governance. The gap of a fundamental FSG main actor map was together with disparate legislation, no early warning foodborne outbreak systems, burden on already over-burdened public health sector and limited funds for food safety governance was why the outbreak such as the listeriosis one was an inevitable outcome of an ineffective and inefficient FSG system (Benatar, 2013; Grace, 2015; Korsten, 2018 and Olanyu et al., 2019).

4.5.3 The Main Food Safety Governance Actors: Roles, Responsibilities and Linkages

Politically and economically government saw a real possibility to develop agriculture into a secondary industry, building infrastructure which funded education and skills training to create sustainable growth and employment in rural areas thus food safety and its related components was part of an agricultural and agri-business approach the RSA government (Stats SA, 2000b). This focus on the agri-business contribution to GDP was the reason the government didn't pay attention to FSG as it concentrated power between itself and the private sector (Ledger, 2016). The lack of government steering to advance pressing socioeconomic reforms had enabled nongovernmental

actors, notably those from the corporate sector, to capitalize on this governance gap and use it to pursue their own private interest, not necessarily aligned to the public good (Boatema et al., 2019 and Ledger, 2016).

The Food and Advisory Council (2019) had noted that three departments were responsible for FSG however Korsten (2018) had pointed out that the legislation was disjointed and outdated. Although acts such as the Standards Act (No. 8 of 2008) envisioned a broader horizontal governance approach, the Act conceded ultimate responsibility to the relevant cabinet Minister. Unlike most of its FSG counterpart acts were vague in details of who the stakeholders explicitly were, Municipal Systems Amendment Act (No. 7 of 2011) unequivocally promoted at a supporting level the encouragement of local communities and organizations to have participated in all processes, noting that together they were all responsible for a safe and healthy environment which included potable water, which connecting the dots was vital for safe food. Linked, based on the City of Tshwane (2019) documentation, it appeared that local government were implementing actors though their exact role and responsibilities were not sufficiently spelt out in the legislation analysed. The nongovernmental actors who were referred to throughout the documentation in general terms, seemed to play a subordinate policy and governance role to government. There are indications, though not always exactly specified, of responsibility expected with regard to the implementation of food safety regulations by the private sector (DoH, 2004). Using the EU example of Kuronen and Caillaud (2015), RSA government actors had horizontal governance, but this left FSG nongovernmental actors a minimal opportunity for a substantive and contributing role in terms of policymaking, decision making and implementation. The main FSG actors were the government at local, provincial and national level (de Villiers, 2019) and the private sector who held an imbalanced grip on network and power relations within horizontal FSG (Pereira, 2013 and Ledger 2016) with nongovernmental actors ability to leverage and link unduly influenced by this imbalance with international organisations such as the WHO (2016; DoH, 2018a and DoH, 2018b) having more influence and direct link to government.

4.5.4 South Africa's Preparedness for a Foodborne Outbreak

Time

For the government and the WHO (DoH, 2018a, WHO, 2018) the outbreak officially ended 14 March 2018. According to these sources it can be ascertained that government's stated view supported by the international actors was that the outbreak occurred between 1 January 2017 to 14 March 2018: a total of 427 days. Furthermore during these 427 days, based on these documents, the timeline was as follows:

- I. the NICD was aware of the first case with multiple more creating a pattern in January 2017;
- II. the public was officially informed of the outbreak on 5 December 2017 – 338 days after the NICD were aware of the first reported case;
- III. the Joint Public Health Emergency Committee was established 338 days into the outbreak;
- IV. the Committee took 29 days into their emergency work to collect samples;
- V. 98 days later on 3 March 2018 the Committee provided the source to the Minister of Health;
- VI. a day later on 4 March 2018 recall and closure for investigation notices were issued;
- VII. another day later on 5 March 2018 when the WHO became part of the technical expert coordinating team, an Emergency Response Plan drafted – 418 days after their calculation of the start of the epidemic;
- VIII. emanating from this; the outbreak was considered over 9 days later on 14 March 2018.

In terms of the investigative process, Thomas et al. (2020) acknowledged that Whole Genome Sequencing (WGS) was used to identify the *Listeria monocytogenes* strain, which was almost 100% sequence type 6 (ST6). To undertake WGS, food samples were selected from homes of infected patients of which most were the popular processed meat known in South Africa as "polony". These food samples underwent the WGS which confirmed the ST6 strain. Track and trace was undertaken whereby a single production site was identified with over 95% probability of being the sole manufacturer of the tainted "polony". For them, correct procedure was followed but

admittedly it was a time-consuming process. Yet given the South African status of being the most inequitable in the world (IMF, 2020) within which FSG had operated in at the time, several non-governmental actors questioned the official timeline, for example Boatemaa et al. (2019) surmised that the investigative process would have gone much quicker if there were a proactive food safety governance multi-actor team in place. They continued that the timeline of the investigation would have been speedier if such a team worked with updated legislation and had taken a horizontal policymaking, implementation and monitoring approach, which leveraged the capacities and resources of the multi-actor process that government centrally steered. The country's official opposition party, the Democratic Alliance, noted that whilst the source had eventually been identified with the necessary steps then followed, the grievous delay was due to a lack of political will on the part of the Minister of Health at the time coupled with the government's failure to have a good food safety system in place to readily respond to such matters (Whitworth, 2018).

Severity of the Outbreak

Whilst the rarity of listeriosis was a major point that most seasoned researchers stressed (Wilkinson, 1989, Lorber, 1997), it should be acknowledged that it was often initially treated for other infections in that it was problematic to initially diagnose as it had an incubation period in the body of up to 70 days (WHO, 2018). Given the delay in diagnosis of up to 70 days through no fault of health practitioners and the global standard death rate of 27%, the WHO (2018) aligned itself to the RSA government statistics, investigation steps and timeline (NICD, 2018a). The WHO (2018) noted that the minority of severe cases and tendency across countries to have the same groups being severely affected was important as it showed that RSA was not an exception to *Listeria monocytogenes* that seldom converted in humans to listeriosis. The fatalities also showed that the South Africans who died were unfortunately within the same death rate range of international listeriosis outbreaks. The difference is that that number infected were more than in any outbreak before, but the recoveries, severe cases and fatality were all similar to other outbreaks, suggesting that the RSA preparedness or at least response was not out of proportion to other country outbreaks.

These statements were countered by non-governmental and non-international actors (Boatema et al., 2019) with the assertion that the very poor state of FSG in RSA was in itself the reason for the outbreak and by extension the dubious title of being the world's largest listeriosis outbreak ever. As with the timeline, they cited several factors that combined caused the outbreak that scientists feared would occur but could have been prevented through central-steering horizontal governance that leveraged resources to ensure improved legislation, unified testing and safety protocol standards, sufficient, equipped and appropriately trained staff such as EHPs (Korsten, 2018). Ledger (2016) had previously stated that the out of proportion power that the private sector leveraged with the government in FSG would result in vested interests being placed above the public good within the management of food systems, which included FSG.

Linkages: Agendas, Power and Resource Leveraging

Pereira (2014) and McMahon (2013) pointed to several actors in the nongovernmental sphere namely: academics, policy researchers, scientists, lawyers, small businesses, nongovernmental organizations; all with the knowledge, skills and experience in working with food safety governance who were excluded from the policymaking processes with only two main actors being government and the private sector. Hunter-Adams et al. (2018) further elaborated that this largest ever worldwide outbreak was an opportunity to investigate the power dynamics between the government and nongovernmental actors to improve food safety governance. Ledger (2016) explained that policymaking needed to be understood in the context of actor linkages and power relations. At the same time whilst she acknowledged the important role nongovernmental actors had to play in governance, she cautioned that power relations were not equal, and some had devolved interests to create rules that favoured their own position. Thus, as leveraging the resources of nongovernmental actors was important to governance, so too was the importance of government steering the policymaking process to avoid the interests of powerful nongovernmental actors becoming the unwarranted focus of policy. In context, Vogel (2003) reminded that actor interests did differ, which was not negative in itself especially where these interests had public support. In their study, Niehaves and Plattfaut (2011) advanced that government tended to revert to or select market governance where it lacked

internal capacity and became heavily reliant on consultants to design and execute governance processes. Moreover, in agreement with Greany and Higgam (2018), they found the powerful actors dominated making the governance process less inclusive and collaborative.

Ledger (2016) recognized the deregulated nature of South Africa's food system. She further stated that this system of deregulation has failed and could be plausibly seen to contribute to the very failures it was designed to originally address. Her argument entailed that policymaking was restricted by legislation inhibiting the government to intervene in the market sphere and steer towards socioeconomic redress. In explanation, Pierre and Peters (2000) warned that even in network governance, one had to consistently reinforce multi-actor equality in policymaking processes amongst the nongovernmental actors who all have interests, but the formidable policy elites held the resources to exclude actors and impose their agenda at the expense of the collective societal good.

Boatema et al. (2019) found that even where education and enforcement occurred, it was poorly coordinated between the three major departments. They further noted that the current system was self-regulatory, lacking a single central authority and thus reliant on corporates to be responsible to conduct audits, training, testing and consumer education and review their compliance thereto. They concluded that stronger FSG on the part of government was required to clearly delineate stakeholder roles and responsibilities especially that of the private sector to ensure the legislation becomes actionable to prevent food safety crisis such as the 2017/18 listeria outbreak.

Horizontal vs Vertical Governance and Central vs Self-Steering

Ultimately, networks could be both self and centrally steered in different aspects but final arbiter chief steerer should have been government, which was not the case beyond paper at the time (Anderson, 2011; Ledger, 2016 and Tremeer et al., 2017) whereas central steering could have prevented or minimized the outbreak extent (Korsten, 2018). Thomas et al. (2020) agreed that such a pre-emptive governance response was not in place but necessary with RSA having a population with a high amount of comorbidities, due in large part to a significant number of individuals who were immunocompromised by HIV/Aids. Ledger (2016) had earlier noted RSA FSG

should have amounted to government using its sole authority and legitimacy to centrally steer and manage the food system that was inclusive of nongovernmental actors beyond the private sector. This would have established meaningful participation in the governance processes at conceptual and implementation phases. The government was lapse in its duty as it allowed the private sector major companies in this industry to self-steer, hence government wasn't prepared as it did not have government capacity at all tiers – national, provincial and local – having left private sector to draft and follow their own policy, in their best interests (Korsten, 2018).

The lack of government steering to advance pressing socioeconomic reforms has enabled nongovernmental actors, notably those from the corporate sector, to capitalize on this governance gap and use it to pursue their own private interest, not necessarily aligned to the societal needs (Ledger 2016). These views reinforced de Villiers (2019) advocacy that the Constitution should be read horizontally in terms of government governance as all three tiers have responsibilities to coordinate and collaborate to ensure rights enshrined in the Constitution were delivered however it was read vertically where national government decided, provincial government supported and local government implemented. Anderson (2011) agreed and separated formal government policymakers and nongovernmental policy actors. He acknowledged the value of horizontal interaction and processes but ultimately noted that policymaking, decision-making and implementation was the mandate of government who alone had the legal authority to make binding decisions affecting the state. For him governance was by legal necessity vertical with accommodation for horizontal value-add. Korsten (2018) disagreed that horizontal governance was merely a bonus having stated that major gaps in FSG at the time of the outbreak that could have been averted if there was a lack of consolidated and updated legislation with regulations, which horizontal policymaking could have addressed.

CHAPTER FIVE (5):

CONCLUSION

5.1 Chapter Introduction

The dissertation asked the question of who the main FSG actors were in RSA at the time of the 2017/18 listeriosis outbreak with the aim being to fill the identified research gap of a main FSG actor map. To this end, a qualitative study was engaged in with a transformative philosophical worldview. A philosophical worldview is how you experience the world through your set of beliefs (DeWitt, 2010). The transformative worldview ensured that FSG lessons that further develop, implement, monitor and review food safety protocols are aligned to the viewpoint of Rowe and Moodley (2013) that public health is a human right and not a private commodity. As per Rowe (2014) this dissertation within the specific ambit of FSG was addressed a socioeconomic justice right to access safe food hence as previously noted by Herr and Anderson (2014) proper governance measures were required. Issues of governance in Africa, including South Africa, cannot be studied without the connections of colonialism (Maldonado-Torres, 2007 and Maathai, 2009).

Whilst this study acknowledged that governance is used by actors across the social sciences, it took the position that here it should be seen within the transformative philosophical worldview within political science. This dissertation linked governance to political sciences to public policy within the context of FSG (Patterson et al., 2017). A governance conceptual framework as explained by Stoker (1998) was used to answer the study question and aim; specifically, network governance was applied to this dissertation which was ultimately an actor mapping exercise. In terms of network governance, it was deemed by Kickert et al. (1997) to be a necessary component of network success. They proposed that the inherent shortcomings of the network governance could be overcome through horizontal governance that was centrally managed. To be clear, governance was not necessarily hierarchical but had more potential to be broadly inclusive and collaborative, which this study addressed, focused on governance networks in theory and application (Stoker, 1998). Relating this to FSG, Moreno and Lopez Oglesby (2018), also saw governance by its very definition cutting across sectors with FSG not being an exception, enabling the move

from governance to the dissertation topic of FSG, with it recorded that there remained differences in semantic and content opinions. Given the opinion of the Malabo-Montpellier Panel (2017) that in Africa sustainable food safety was impossible without good governance, this study weighed the research results in terms of FSG and actor maps that were contextualized within the RSA FSG political landscape.

The methodology was a scoping literature review as written about by Pham et al. (2014) underscored by what Grant and Booth (2009) emphasised that a literature review must be the foundation of all studies, which was the case with this dissertation. Using the approach of Heleta (2016) multiple types of primary and secondary sources were used until saturation point was deemed to have been reached (Kumar, 2014).

The outbreak was used as a setting against which to draw the FSG actor map in RSA at a specific period of time being 2017/18. Again the institutionalised colonisation (Maathai, 2009 and Fanon (1959), of RSA were used to underscore the importance of FSG. Food was a basic physiological requirement for all human beings and therefore needed to be safe (Nagyova et al., 2019). Walthouse (2014) pointed to the impact that the lack of meeting this physiological base entailed as without proactive network governance action to provide proper shelter with clean sanitation, accessible quality water and safe, nutritious food and in the process, greatly unburden the public health sector (Stats SA, 2019c); the cycle of poverty would continue; meaning the base human needs would not be met inhibiting self-actualization and overcoming the developmental challenges (Maslow, 1943). Moreover, as a matter of public health with Grace (2015) having stated that most foodborne illnesses occur in developing countries. This was reinforced by the Havelaar et al. (2015) statistic that foodborne deaths accounted for 120,000 annual deaths in Sub-Saharan African as well as the work of Averett (2020) who likened the impact of such illnesses to that of HIV/Aids, malaria and tuberculosis. This was why Benatar (2013) advocated for a National Health Insurance in RSA because as Olanya et al. (2019) noted the cost of containing an outbreak was far greater than proactively establishing an efficient and effective FSG system.

5.2 Key Findings

5.2.1 Food Safety Governance in South Africa

Lapses in FSG were expensive (Grace, 2015 and Olanya et al., 2019). If lapses were allowed to continue, it would result in diminished FSG adherence and standards (Wilson and Worosz, 2014). To address these lapses, the absence of a main FSG actor map was identified as a research gap (Smit, 2016) with Donnelly (2018) as well as Battersby and Haysom (2018) promoting that a FSG main actor map was required that clarified roles, responsibilities and linkages. For Tremeer et al. (2017) this map was best placed within the broader food system that included the entire scope of the food value-chain. To do this, McMahon (2013) argued that FSG needed to return to its political roots as with Schutte (1993) the over-focus on technology led it astray from being research that was political and economic impacting on RSA society.

5.2.2 Food Safety Governance Main Actors in South Africa

Pereira (2013) acknowledged that one of the reasons FSG was not a priority to government was that government saw the GDP contribution from the industry's private actors and it was beneficial for them to have vertical governance in terms of legislation but two actor horizontal governance allowing the private sector in effect to be deregulated and responsible for policing itself (Boatema et al., 2019). This imbalance in power relations caused Korsten (2018) to have government not only centrally-steer but do so in a manner that was inclusive horizontal governance. Whilst scholars such as Rhodes (1996) thought that governance could not be anything other than self-regulating; others such as Schout and Jordan (2005) warned that self-steering could be counterintuitive to achieving governance aims mainly where challenges were cross-cutting. In such cases, Klijn (2001) supported the call for central steering

5.2.3 Network Governance

Network governance as written about by Cohen and Horev (2017) is the most apt lens for viewing and engaging with FSG actors. In turn as per Pereira (2013) and Ledger (2016) concerns regarding the corporate sector's uneven concentration of power,

horizontal governance that leverages resources amongst stakeholders and promotes trust through inclusivity is best advised with the government centrally steering and well managing the coordination of the horizontal FSG network of actors (Korsten, 2018; Shearer et al., 2014 and Wollman, 2008). Such a well-coordinated governance network of actors could overcome challenges such as disjointed legislation, high burden on an already overwhelmed public health system and minimise costs by being proactive (Olanya et al., 2019; Patterson et al., 2017 and Benatar, 2013).

For Tantivass and Walt (2008) the increasing number of FSG actors meant that a network governance approach was best. To achieve a successful governance network, Cohen and Horev (2017) advised that resources needed to be best leveraged, Wollmann (2008) added that trust was critical especially in practically applied stakeholder relations (Shearer et al., 2014). Overall, a change in the approach to FSG required a change in how governance was formed and functioned such as its actors (Marsh and Rhodes, 1992). Importantly, Bettcher (2017) reminded that such changes and research to support it need to be locally contextualized with Wachira (2020) adding that Africa was receptive to governance but not Western imposed constructs; rather solutions that took Africa and its actors into account.

5.2.4 Power Relations and Linkages

Government co-ordination was poor between the three government departments tasked with FSG namely DoH, DALRRD and the DTI (Boatema et al., 2019) which led to government handing enormous power to the private sector at the expense of nongovernmental actors who had little power and resources to then leverage. Pereira (2013) simply added that the FSG actors' powers were unbalanced, making horizontal governance difficult in the absence of government centrally steering (Korsten, 2018). The private industry according to Reuters (2018) was dominated by the main market shareholder such as Tiger Brands, RCL Foods, Eskort Bacon Co-Operation, Rhodes Foods and Astral Foods.

International organizations such as the WB, FAO, WHO (2020) also played a role indirectly and directly as food safety was seen as critical to a winning network governance food system chiefly considering the globalisation of food. The FSG main

actor map therefore pointed to these power imbalances and as such roles, responsibilities and linkages with government and the corporate sector supported by international organisations dominating to the extent of exclusion of nongovernmental actors (Pereira, 2013).

5.3 Recommendations

Recommendations for further study to enrich food safety governance literature include looking at FSG through the lens of a holistic a food system. Developing policy impact outcomes that can assist to domesticate and use local theory to develop food system legislation and regulations that through horizontal and balced power governance sees stakeholders work together through a formalised, centrally-steered platform that expands on the actors roles and responsibilities, becomes more inclusive and this creative and innovative in research and design of proactive solutions to overcome challenges amongst actors and governance processes in food safety and its linkages.

5.4 Chapter Conclusion

The research aimed to address a literature gap in FSG in RSA, namely the absence of a main FSG actor map by asking who these actors and emanating therefrom developing a visible map. This was foundational research and can be useful in future to those researching FSG in RSA especially for improved governance lessons. The dissertation itself not only met its aim of producing a map of the main FSG actors but also shed light on confronting such challenges within the social context they exist by using local approaches whilst attempting transformation in how FSG is engaged with socioeconomically. The study further in mapping the actors highlighted challenges to FSG and lessons learnt from the 2017/18 listeriosis outbreak in RSA which was the largest in the world.

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APPENDICES

- A. Submission Form
- B. Late Submission Form
- C. Ethics Approval Letter
- D. Non-Plagiarism Report
- E. Published Article

